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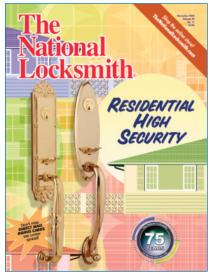
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On The Cover...



Long known for its high-security hardware in commercial, government, institutional and industrial markets, Medeco is now applying and marketing the same high standards and security to the residential marketplace.

Publisher	Marc Goldberg
Editor	Greg Mango
Art Director	Jim Darow
Technical Editor	Jake Jakubuwski
Senior Writers Sal Dulcamaro CML, Michael Hyde,	

Dale Libby CMS, Dave McOmie, Sara Probasco, Robert Sieveking

Contributing Writers

John Blankenship, Tony Blass, Ron & Chris Curry, Mark Daniel, Richard Allen Dickey, Ken Holmlund, Tom Lynch, Tom Mazzone, Randy Mize, Tom Seroogy, Steve Young

Director of Sales & Marketing

Jeff Adair

Advertising Account Manager.

Debbie Schertzing

Accounting Manager

Sheila Campo

Production Assistants.

Dave Krofel, Joseph Bonus

Administrative Assistants ...

LaVerne Schertzing, Chandra Smith

Shipping Manager.....

Allan Galvez

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(630) 837-2044 • Fax: (630) 837-1210 E-Mail: natllock@aol.com See us on the World-Wide Web: www.TheNationalLocksmith.com

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Using the pin matrix.

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Strong as aggregate, light as laminate.





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A new body style, but no transponder.





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There are no codes anywhere on the bike.

Framon Model #2-D **Code Machine**

Featuring digital readouts instead of old style micrometer controls.



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Actually she gave away over 250 of the new '05 Pontiac G6's! The G6 replaces the Grand Am name plate. Here is the new ORIGINAL transponder key blank. Ready for On-Board Programming. From A1 Security

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385,390,395,400,405 Sports \$1.59 410,415. 420,425,430. Faith \$1.59 435,440,445 Playboy \$1.99 600,605, 610.615.620 Racing & Gaming \$1.19 835,945.950,955

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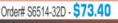
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COMMENTARY

Stay Safe And Get Some Free Publicity



Locksmith, Ron Riedesel who was helping authorities repossess a TV, opened a door last April when 36-year-old Wilbert Pruitt fired a shotgun through that door. The locksmith was wounded. A deputy then shot and wounded Pruitt. Pruitt was charged with attempted murder and reckless use of a firearm. In a plea bargain, he pleaded guilty to willful injury and interference with official acts.

Interference with official acts??? Shooting a locksmith is interfering with official acts??? While we understand that plea bargaining is standard for many, if not most crimes, the nature of this one just smells bad. You shoot a locksmith doing his job for officers of the law, and shooting him is interefering with "official acts."

I sure am glad that the locksmith lived. I'm also glad that the deputy wasn't shot. But I'm pretty darn sure that in instances where deputies have been shot, and where prosecutors have been targeted, their attackers did not have their charges bargained down to interfering with official acts. It sounds like what you'd be charged with if you threw a water balloon at the mailman.

Have you ever thought that the power of the press could benefit your locksmith business? Take a quick look at part of a story that ran in a local Pennsylvania newspaper.

Locksmiths Go High Tech

For Jim Borza, the expense has paid off.

The Mechanicsburg-area locksmith bought two machines that allow him to copy transponder car keys – the kind that use a computer chip – and now he gets "about three or four" requests a day for copies of the electronic keys.

Many new cars come with the built-in security feature. If the computer chip in the key doesn't match the one in the car's ignition, the key won't turn.



Reading this story, we are reminded that your small local newspapers struggle every day to find items of interest to cover in your community. The local angle is what all small

media outlets are looking for. Here's your marketing tip of the day. Spend five minutes and call your small local newspaper or radio station. Ask

for the news desk. Tell them a little about what you do, or an investment you've made in your business.

You may be very surprised to learn that from this little phone call, a story or interview can result. That helps the local media cover their community. And it also helps you with free publicity in your business area.

Man Goldburg

Marc Goldberg
Publisher

Have questions? Want free technical help? Free Locksmith Forums!

www.TheNationalLocksmith.com

Mango's Julessage

The Fast and the Furious

he names Charley, Frances, Gaston, Ivan and Jeanne, have become all too familiar to Florida residents these last few months. That's because the 2004 Atlantic hurricane season has been one of the busiest and most destructive in history, and Hurricane Charley, Frances, Gaston, Ivan and Jeanne have forever left their mark in the sand.

To date there have been 13 such named storms thus far this season, resulting in numerous federal disaster declarations covering 13 states and Puerto Rico. Not to mention the Tropical Storms and Typhoons, which have also caused considerable damage this year.

On September 14, Hurricane Ivan, a fierce category 4 packing 120 mph winds had its eye on the small Pensacola, FL bay area landscape. After already cutting a swath of destruction across Jamaica, the Cayman Islands and the Caribbean, Ivan wanted more, and what Ivan wants, Ivan gets.

As a friend and longtime writer for *The National Locksmith*, Steve Young experienced the fury of Ivan first hand, as man and beast came eye to eye. Steve is no stranger to the locksmith industry, or to the hunger of a hurricane. As a longtime Pensacola, FL resident, he has experienced a few.

In the aftermath Steve said:

We are running on generators and eating high on the hog. We cooked everything that was in the freezer last night on the gas grill. Mom did fine, but our boat is sitting on top of a dock. Mom's house lost one of the walls on the side of the carport, but the roof didn't

collapse. Ive got props in place until we can get it fixed, but that was the extent of her damage. I lost most of the shingles at my office and got some water damage. I also lost one of my huge live oak trees and the fence. Our house is ok, except we lost the chimney cap and got some water damage there. All in all we are a LOT better off than many.

A few days later Steve wrote:

Yesterday was a busy day and

today looks to be the same—for that matter the next couple of weeks. Still no power other than the generators, but landline phones are working and the cell phones are also working better—it depends on where you are. We got the boat floating again, I was afraid that the dock would tear it









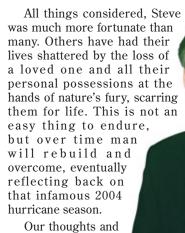
out, so we had to make getting it afloat again a priority. Now that this is out of the way I'll be working on the roof at the office and clearing trees. Fortunately it shouldn't rain for another day or so; by then we should have all of our roofs sealed. A friend had to make a trip to Montgomery, AL last night to bring back gas, roofing material and other supplies.

up as the tides went in and

The cars both have a few dents, but they run and we don't have any broken glass.

It looks like a war zone here, but we'll be fine.

Steve & Karen Young



Our thoughts and prayers are with all. INL

Chez Manzo

Greg Mango Editor



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Pop-Ups, Spam & Viruses

I read Greg Mango's article regarding the Internet as a source of information and the good and bad aspects of is such as pop-ups and viruses. With high technology, the Internet and education fast becoming the way of the future. I can see his point since the wife and I recently embarked on a college course in Computer and Repair. At first, as Greg stated, it was one popup right after the other. It didn't matter what task the computer user was doing, important or no, there they were. Well one thing my instructor stated was usually for every computer problem there was a reasonable solution. You just gotta find it. What these are caused by is Adware either where the computer users get a free offer while surfing the web, or through e-mail Spam, or a download. In short, it is a sponsored ad, and they will slow down the performance of your computer.

The solution to the pop-ups that I found to work the best is a software application called Ad-aware 6.0. Once downloaded and configured, it works with a once a week activation and scanning of the harddrive. http://www.cnet.com has this to download.

Now to get rid of a lot of the Spam. If the computer is equipped with Windows Xp simply go into the Outlook Express, find your tool bar at the top, find message, left click the mouse being just one of many input devices, navigate down to Block Sender and click on it per each email you wish to block. O.K. the operation and this sends the next Spam received to the delete folder.

When it comes to viruses, let's face it, if I hadn't had Norton Utilities anti-viral and a firewall fully updated with Windows Xp, I simply would not be sending this e-mail. Norton not only caught a worm, but told me the IP address. Also the way Norton is setup, the software scans each outbound e-mail prior to sending it.

Hopefully this will help others as it has benefitted us.

Respectfully,

Willie R. Bowen Virginia

It's Christmas Again

I recently learned that my tip was printed as a Technitip. The next day here came my gift of key blanks. My thanks to everyone for them. Also, *The National Locksmith* is a great magazine, keep up the terrific work.

Larry Teal, CPL E-mail

A Point to Ponder

The January 2004 of *The National Locksmith* had an article on page 91 titled "Deadbolt Drilling Jig," which I found rather interesting. However, on *The National Locksmith* CD that I have, I found that in September of 1988 not only featured this same tip, but a sketch as well. I actually did this tip and it is a good idea. It works fine.

I just wanted to mention that, in a manner, the article had been run before. Hmmm.

Hillard Kloda Baltimore Lock & Key

Dear National Locksmith

It was a great honor to have you publish my tip for the twenty-second safe opening in the July issue! I was really floored to receive the La Gard 3040 Electronic combination lock for my prize. I have just the container that has been begging for a retrofit with this lock.

You publish my favorite locksmith magazine and *The National Locksmith* is the only trade magazine that I read from cover to cover each month. Keep up the great work.

Thank you.

Bobby C. "Bob" Floyd Arkansas

Thanks for the Prize

I would like to express my thanks for the Ilco key blanks. I received as a prize for my entry in the Technitips column a while back. These key blanks will be used on a daily basis to supply the needs of my customers right from the start. Again, thanks to TNL and Ilco key blanks for such a useful prize.

ПL

Jim Heffner E-mail



The National Locksmith

1533 Burgundy Parkway Streamwood, IL 60107 Attn: Editor

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Barantec's Indestructible Reader with out Keypad

Barantec has developed the Everswitch Prox, an indestructible reader with no keypad. Based on the company's Everswitch Inside technology, Barantec's indestructible solid-state reader offers the strength and durability where proximity (125KHz) only is required for entry. Featuring a tamper proof and weather proof, solid brushed aluminum sealed casing, these readers are designed to function dependably even in harsh climates or high-risk, high-traffic environments. The new Everswitch Prox is perfect, especially in certain environments where plastic is not suitable.

Equipped with an HID format proximity reader within a sealed, indestructible metal housing, the card reader is designed for both international and U.S. single gang electrical box mounting applications. The Everswitch Prox consists of a standard Wiegand output format, 5–12 VDC power, 150mA current draw and red and green status LEDs. A natural aluminum color is standard, but other colors are available upon request.

Barantec's "Everswitch Inside" logo represents the company's patented piezo technology, which provides the shell to encase any technology including both proximity and contactless smart cards.



Corbin Russwin Introduces DC6000 Door Closer

Corbin Russwin recently introduced the DC6000 series door closer that is ideal for high-use openings. The DC6000 Series is ideal for openings that must meet ADA requirements, such as schools, office buildings, health care facilities and retail complexes. This Grade 1 closer meets ANSI/BHMA A156.4 requirements and UL and UL10C positive pressure requirements for fire openings.

unit easier to adjust for optimum power setting, a new spring adjustment was added. Internal advantages include a chrome silicon wire, triple set for longer life, and new, improved closer oil

The cast iron body of the DC6000 is strong and durable, and to make the

that allows the closer to function well at temperature extremes and with reduced friction.

The new closer features a full complement of arms to meet any installation demand. The DC6000 also offers a full array of security features. Captured valves and optional Torx® security screws help make the closer tamper resistant. In addition, self-drilling screws and a QUIK-INSTALL™ bracket make installation quick and easy. Retrofit plates allow for easy replacement of the 4040 or 4010 closers without modifying the door prep.

ITS 96-1 Concealed Door Closer

DORMA Architectural Hardware's ITS 96-1 concealed door closer can be mounted into the top edge of virtually any door to provide effective, reliable and unobtrusive door control.

Nearly invisible when the door is closed, the ITS 96-1 closer utilizes an efficient cam-and-roller design that combines a user friendly opening force with excellent closing force at the latch.

The ITS 96-1 line of concealed door closers can be installed in any number of interior door types—such as interior wood, hollow metal and aluminum—that have a minimum top width of 1³/₄" (4.45 cm), and are up to 36" wide. The ITS 96-1 closer is suited for virtually any doorframe combination.

The closer features adjustable spring force size 1–3. Closing force, as well as sweep and latch valves, can be accessed easily for adjustment after installation.

Optional hold open is adjustable between 80 and 120 degrees.

The DORMA ITS 96-1 Series is listed by U.L and C.U.L. under their continuing reinspection programs and is BHMA certified to the requirements of ANSI A156.4 for Grade 1 exit devices. The line features an industry-best 25-year warranty.



HPC Lever Lock Handle Remover

With the advent of the Americans with Disabilities Act (ADA), lever lock handles have become mandatory in schools, businesses, government offices and many other public places. Servicing a locked lever handle used to require either picking the lock or destroying it, but HPC has a tool that offers you another solution.

The HPC Lever Lock Handle Remover (LHR-100) eliminates the need to destroy the lock when picking is not an option. The tool is affixed to the lever handle with non-marring set screws, the pin depressor is used to engage the release mechanism on the handle, then a few turns of the compression bolt easily removes the handle, without damaging the lock or handle.

The pin depressor and setscrews are fully adjustable allowing this tool to be used on most lever

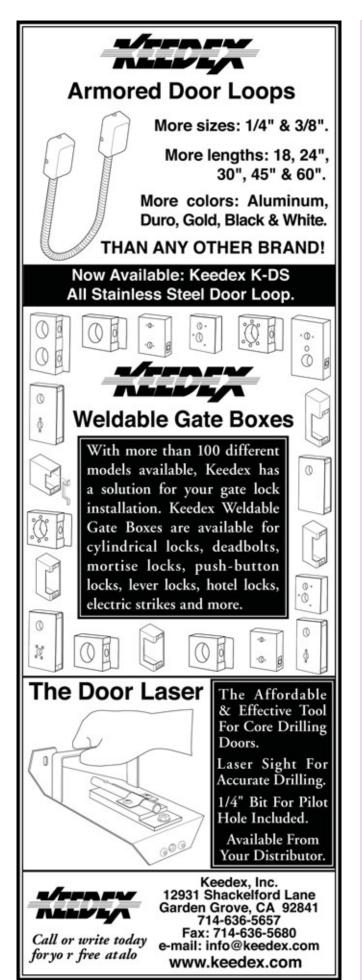
handles on the market. The compact size makes it easy to carry in your toolbox. The Lever Lock Handle Remover is simple to use with amazing results.



Ilco Unican Universal Combination Cylinders

The 1599 Universal Combination
Cylinders by Ilco take flexibility to the max.
A tailpiece assortment is included standard with every 1599 cylinder and enables this knob/converta cylinder to be used as a key in knob, key in lever, single deadbolt or double deadbolt cylinder. The screw on cap plug/tailpiece retainer insures ease of tailpiece installation and durability.

The versatile 1599 Cylinders are available in over thirty of the most popular keyways and fit many different applications. All 1599 Cylinders feature the strongest, best designed tailpieces in the replacement cylinder market, able to withstand up to 70-inch pounds of force. These high quality cylinders are Master Key and Grand Master Key compatible into OEM Systems.



Kwikset Unveils New Venetian Bronze Finish

Venetian Bronze, the latest alternative door hardware finish from Kwikset® is hand finished to create unique bronze highlights. The finish is available on most of the Kwikset UltraMax Line.

The demand for rich alternative finishes has migrated from the custom and luxury home market in to the homes of Middle America. First and second time homeowners are replacing polished brass hardware with softer tones that add a touch of flair.

Door hardware replacement is no longer a difficult or cost prohibitive project for most homeowners. The new alternative finishes make color coordination easy between hardware fixtures and home furnishings like mirrors, faucets and lighting fixtures.



Retrofit Solutions from MAG

Since 1968, MAG eng. & Mfg. has been the industry leader in the door security and repair category. Over this 36-year span, MAG has manufactured plates for unit locks, mortise locks, cylindrical locks, lever locks and now electronic locks.

MAG is proud to announce the availability of door reinforcers and one-sided remodeling plates for most electronic locks on the market today. Whether it is a new installation, a conversion from a standard lockset, or the interchanging of an existing electronic lock, MAG's door reinforcer or flat remodeling plate not only matches the lock manufacturers template for a proper install, but also maintains the strength integrity of the door.

The next time you go to replace a mortise, unit, cylindrical, lever, or electronic lock with a new electronic lock, don't be shocked by the "swiss cheese" look of years of lock upgrades to the door preparation, be sure to prepare yourself with the proper plate from MAG.



Marks Intruder Classroom Cylindrical Leverset

To answer the challenge of security and life safety in today's classroom environment, MARKS USA Custom Lockset Division has developed the "Survivor Series" Classroom Intruder ANSI/BHMA F110 Function Leverset with the Clutch Design.

MARKS USA has incorporated all of the standard features of the "Survivor Series" (Clutch System, Super Strength Retractor, Long Life Lever Support Springs and a Life Test of over 1 Million Cycles) with the new Life Safety Classroom Intruder Function.

Typical Classroom function cylindrical locksets are designed to be locked or unlocked from the exterior, with the interior always in an open position. The new Life Safety Classroom Intruder Lockset by MARKS USA, is designed to be locked or unlocked from the exterior, always open on the interior, but allows in emergency life safety situations, the teacher to secure the

classroom without stepping into the hallway to lock the outside handle.





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Numberall Simplified Key Marking

Numberall Stamp & Tool Co., Inc. is featuring a line of specialized key marking equipment. This equipment is ideal for hotel and motel industries, Universities, school districts and housing authorities, as well as locksmiths. It is useful when large number of keys must be stamped with identifying numbers and letters.

The equipment ranges from the economical Model 23 Type holder, to the Model 137 motorized benchmarking press. Included is the Model 40B, which features a large easy to read dial and a carriage table, which automatically advances after each impression.

Custom made key nests, which fit into the presses, simplifies the marking operation even more. Simply drop the key into the nest and make the impression. Every key is marked in exactly the same place.

Peterson Manufacturing Auto Shutter Tool Set

A new set of dust cover shutter tools are designed in three widths. Each width has its own color coded rubber handle which allows the user quick reference as well as having the handle protected so as not to damage the auto's paint work. The double notching on each tool allows for proper insertion that will not only keep the dust cover open but will offer positioning that will allow easy access to the tumblers. In most cases it will allow a hands-free operation allowing better conditions for reading or picking tumblers as well as lock cylinder clean out operations.

Peterson feels certain that you will experience the best shutter tools on today's market.



Schlage Stand Alone Electronic Locks

Schlage stand alone aesthetic modular locks offer sleek architectural design and complete security functionalities. The CM5200 and CM5600 electronic locksets are available in both cylindrical and mortise designs and work with Schlage D-Series cylindrical and L-Series mortise mechanical locks and Von Duprin exit device trim. CM modular locks work with existing magnetic stripe cards or HID proximity cards and keyfobs and are powered by four standard AA batteries. A low battery warning alert is built into the lockset. All access points are managed by LockLink or LockLink Express software or a company's own access system.

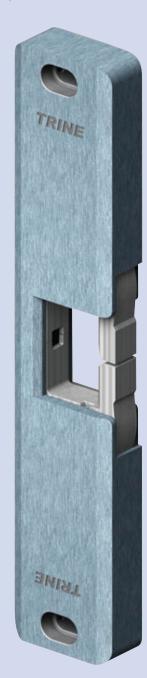
Each lockset maintains up to 1,000 users and stores the last 1,000 events. Locks can be programmed to provide momentary access, one-time or VIP access, or to limit the hours and days a user can access assigned doors or restrict access during holidays, shutdowns or vacations. Other features include auto locking and relocking, and first person in facility unlocking.



Trine's 4800

The 4800 is Trine's latest addition to the Axion Premium Electric Strikes line. Installation is fully surface mounted and eliminates the need for costly and time-consuming frame cutting associated with electric strikes.

Tested to nearly two million life cycles, the 4800 features a one-piece locking mechanism, which provides over 3,800 pounds of holding force as well as field adjustability of fail-safe or fail-secure operation. Built-in electronics with only two wire leads allows for 12–24 AC/DC operations at the same time, providing surge and kickback protection.





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MESSO Reviolential Silvaturare



by Sal Dulcamaro, CML

or many years, Medeco has been known for high security locks and key control. The majority of Medeco lock hardware can be found on commercial buildings where higher dollar value possessions are found, compared to residential property contents. The Medeco product line has been largely aimed in the general direc-

tion of the commercial market. In recent years, the real estate market has changed so dramatically that a house in the \$100,000 range that would have been a mansion just decades ago, is now just an ordinary house. You don't have to live near Beverly Hills to find customers with houses in the quarter to half million dollar price range. While a very expensive house seems like a likely potential customer for high security locks, the designated decorator of the home will often want something aesthetically pleasing to the eve. In the past, the requirement of attractiveness might have knocked Medeco out of the running. That doesn't mean that old style Medeco hardware was specifically unattractive, it just wasn't as nice looking as many of the other brand decorative hardware product lines. Well, those days are gone.

Medeco has managed to combine both beauty and high security with some of their new residential lock 1. Combining both beauty and high security with the Cambria handleset.

products like the Cambria handleset, (see photograph 1). It features a grade 1, UL437 deadbolt, highquality solid brass construction, and is available in an assortment of finishes and functions. It is available in an anti-tarnish brass finish along with satin nickel and oil rubbed bronze. The grade 1 deadbolt is not only attractive, but heavy-duty and very solid. The UL437 patented key and cylinder system gives you both pick and drill resistance to be head and shoulders

Continued on page 21



2. The Tara 1 design handleset.

above the rest of the competition in the residential lock market. They are available in both 2-3/8" and 2-3/4" backsets, with a door thickness range between 1-3/4" and 3".

The Tara 1 design handleset is shown here with a mortise style lockset, but is available (like the Cambria) with a latch and deadbolt combination in the same finishes. (see photograph 2). Backset and door thickness ranges are the same. Both design types also have a 5-1/2" center between knob and deadbolt crossbores. The Tara II design (not shown) has similar contours except it is a twopiece trim set compared to the one-piece trim of

to the one-piece trim of
Tara 1. I will go into more detail further into the article, but the decorative handleset units are available in single and double cylinder deadbolt versions.

A closer angled view of the mortise lock unit gives a slight glimpse of the interior knob handle on the other side, (see photograph 3). The slightly higher priced mortise lock unit will require a mortising jig of some sort to complete the installation.

The Maxum Deadbolt

The residential Maxum deadbolt is among the strongest deadbolts you will find. The exterior portion of the lock includes a steel shroud that extends over the bolt to protect the lock against "ice pick" attack and manipulation, (see photograph 4). The Maxum is grade 1 and UL437 rated. It is designed to protect against unauthorized key duplication, picking, drilling, wrenching, kicking, or other physical abuse. A solid hardened steel bolt comes within a heavy gauge steel housing to help protect against physical attack.

The Maxum deadbolt is available as a single cylinder deadbolt with a large inside thumbturn. It is available as double cylinder or a very interesting variation with a unique "captive thumbturn" feature. Using a captive thumbturn can temporarily convert



Trades |

3. The interior knob handle on the other side.

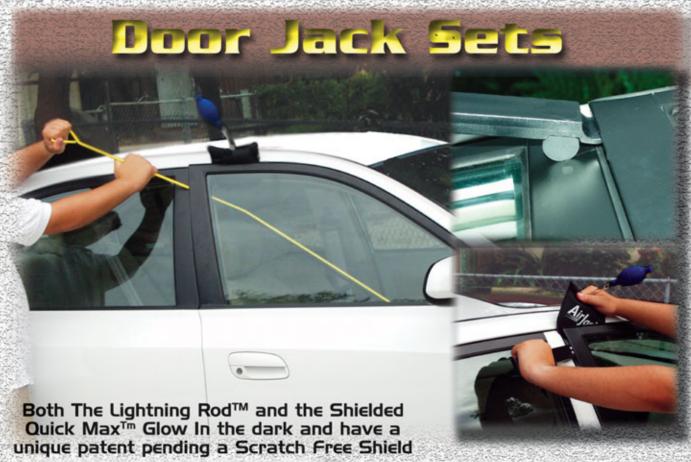
the "apparent" double cylinder deadbolt lock to single cylinder. This is sometimes desirable when there is glass in the door or surrounding the door.

A key without the traditional style key bow can enter the interior cylinder keyway, (see photograph 5). A detachable thumb piece will fit over the abbreviated key bow and can be fastened with a setscrew. The thumb-piece is very convincing

when it is attached to the key, (see photograph 6). When it is inserted into the inside cylinder keyway, you'd think it was an actual thumbturn mechanism, (see photograph 7).

The captive thumbturn feature is more than just a key with a thick piece of metal attached as a handle. It involves a number of parts and mechanical features that can trap the thumbturn key. A springloaded key retaining bar extends from the interior cylinder, (see photograph 8). The spring holds the bar upward within a slot toward the bottom end of the keyway. The spring-loaded retainer would retain a (fully inserted) properly notched thumbturn key. When installed on a door, the retaining bar extends far enough to fit into a matching slot for the exterior lock cylinder, (see photograph 9). A cam at the tail end of the exterior cylinder plug is shaped so that the retainer bar engages and secures the captive thumbturn key until the exterior cylinder plug is rotated one quarter turn to release the captive thumbturn key, (see photograph 10). The wide ends of the cylinder plug cam can protrude far enough to push the retainer bar to release the interior thumbturn key to allow its removal. When the thumbturn key is removed in that manner, the deadbolt

Continued on page 24







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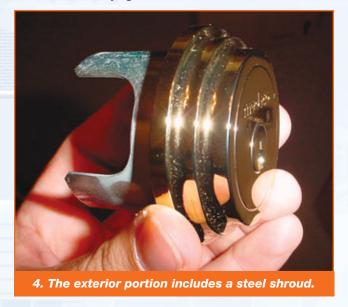
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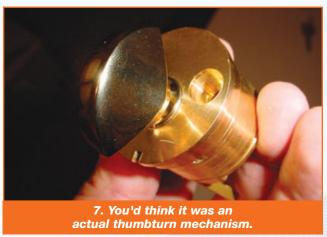




becomes a double cylinder lock. As long as the thumbturn remains captive, the lock is effectively single cylinder.

A pair of operating keys and a thumbturn key show that this is the new M3 patented key control system, (see photograph 11). Notice there is no notch

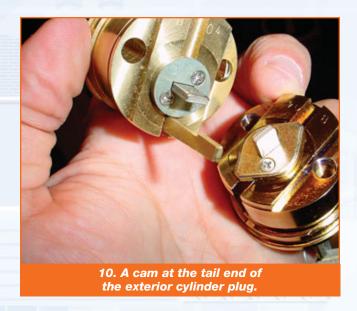






on the bottom of the thumbturn key. A non-notched thumbturn key cannot be captive. Make sure you use the correct style (bottom notched) thumbturn key if you wish to use the captive key feature.

The decorative residential Medeco locksets will be available in the new M3 key style and the previous Biaxial and original Medeco keys, if you wish to code the locks to match existing Medeco hardware. As long as a thumbturn key is captive, it is consistent



with fire codes because the lock does not "act" like a double cylinder deadbolt. Once the thumbturn kev is released, you do have a double cylinder deadbolt. It may be a wise idea to consult your local fire marshal before you go about installing a whole bunch of these captive thumbturn deadbolt locks for your customers. Interpretation and enforcement may vary from jurisdiction to jurisdiction.

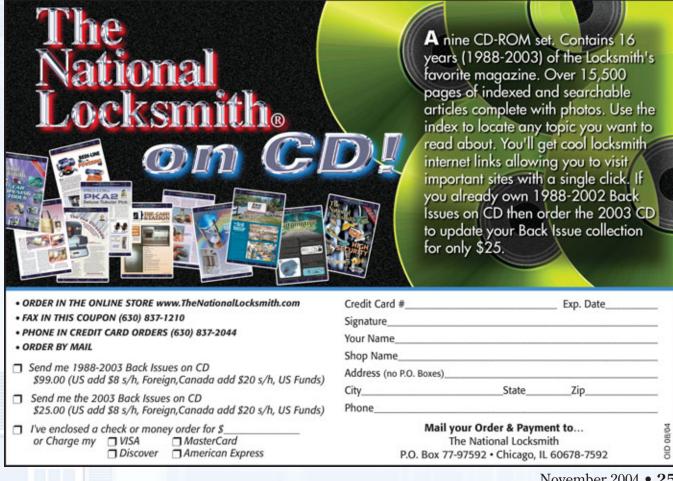
There are other varieties in the new Medeco decorative residential lock line as well. You may want to



11. A pair of operating keys and a thumbturn key.

consider sample lock mounts or at least some color brochures. If you have neighborhoods in your area with high value housing, you may be sitting on a gold mine if you start showing the new Medeco line to these potential customers.

For additional lock information, contact your local locksmith supplier or call 800/839-3157. Circle 312 on Rapid Reply. III





he SABL from Securitron is a self contained, programmable, keypad operated lockset, (see photograph 1). Access is granted through the use of a valid code or with a key. There is always free egress from the inside lever. Interested? Let me tell vou a little more.

The SABL features:

- Stand alone, battery operation.
- Battery life is 100,000 cycles.
- Grade 1 lockset.
- 2-3/4" backset.
- Programs like the DK-26.
- Operating range is from -22°F to 158°F.
- Lifetime replacement warranty.
- Four finishes including, brushed chrome, bright chrome, bright brass and oil rubbed bronze.
- Four keyways including SC1, Yale, Sargent LA and Best IC.

Unlike some other similar products on the market, there is a very clear separation between the mechanical and electronic portions of this lockset. Even though there are two separate components, they combine to make a very nice assembly. I like it!

The electronic portion of the SABL consists of two parts. The keypad (see photograph 2) that is weatherproof, and the battery/electronics chassis that is installed on the secure side of the door, (see photograph 3).

The electronics are powered by six AA batteries that should have a life span of 100,000 cycles, (see photograph 4). The circuit board is on the opposite side from the batteries, (see photograph 5). The bottom edge of the circuit board has a connector for the keypad assembly as well as the drive motor connection, (see photograph 6).

The mechanical portion of the SABL is a 5400 series grade 1, Yale leverset, (see photograph 7). If you remove the inside lever and rose scalp, you will see the two through bolts that hold the rose assembly to the lock chassis, (see photograph 8). With the inside rose assembly removed, you will be able to see the drive motor, (see photograph 9).

The outside lever is removed like most other levers. Insert the key and rotate it about 70 degrees. Depress the retainer with your favorite tool or the one provided and the lever will pull free from the assembly. *Photograph* 10, shows a small plastic part. This is a cylinder spacer that is used with 6 pin cylinders.

The 5400 is shipped from the factory to fit a door that is 1-3/4"

Continued on page 28



1. The SABL stand alone electronic lock from Securitron.

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Continued from page 26

thick. However, the lockset can be adjusted for a door thickness up to 2-1/4" and as thin as 1-3/8". To do this, remove the outside rose assembly and pull two pins, (see photograph 11). Now screw the spacer in or out to adjust for the proper door thickness.

Installing the SABL is a simple task. Aside from the typical 2-



2. The keypad is waterproof and includes 11 buttons and three indicator lights.



3. Here is the inside electronics assembly.

1/8" hole for the chassis, there are a few more holes to be drilled. Two holes are used for the through bolts. These holes are supposed to be 11/32" and located above and below the chassis hole.

These holes were previously drilled into the door for the installation of the original lockset, (see photograph 12). As you can see, they are a lot bigger than 11/32", but will work just fine.

A 1" hole is drilled 2-1/2" above the center of the chassis hole and a 7/16" hole is drilled 4-1/8" above the center of the chassis hole, (see photograph 13).

There are two small 5/32" holes that are drilled on either side of the chassis hole. These holes are turned into slots with a file. The slots allow the inside rose to sit flush on the door.

There is one more hole that has to be drilled on the inside of the door. It is not indicated on the installation template, but it



4. Removing the battery cover will reveal six AA batteries, program buttons and connectors.

has to be there. This is a small hole that is used to secure the top of the electronics chassis, (see photograph 14).

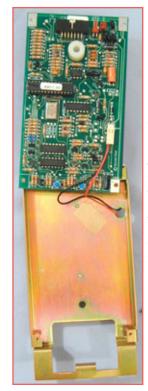
This hole is located 8-3/4" above the center of the lockset chassis hole. It should be properly sized to accept a #6 screw. The screw is provided with the lockset.

If this is a wooden door installation, there is one more hole to drill. This is a diagonal hole that goes from the 1" hole to the chassis hole. This hole provides a path for the drive motor wire to make its way to the circuit board. Obviously, in a hollow metal door there is plenty of room for the wire to pass without additional drilling.

With all of the holes drilled, it is time to start assembly. After the latch was installed, I found it easiest to hold the keypad in place then slide the lock chassis through the keypad and align it with the latch assembly.

Be sure that you don't forget to pass the flat cable from the keypad through the 1" hole, (see photograph 15). Likewise, that

Continued on page 30



5. By
flipping
the
assembly
over and
removing
four
screws,
the
electronics
can be
viewed.



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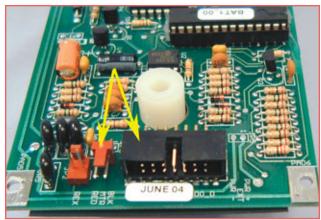
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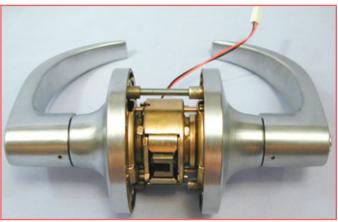


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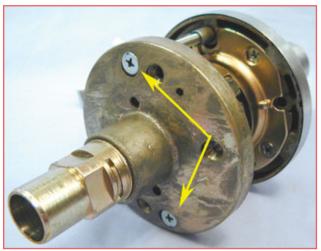
Continued from page 28



6. Here is a good view of the connectors for the keypad and drive motor.



7. The lockset supplied with the SABL is a 5400 series Yale.



8. Removing the inside lever and rose cover reveals two through bolts.



9. With the rose removed, the end of the motor is visible.



10. A cylinder spacer is used with 6 pin cylinders.

small drive motor wire should be passed through the chassis hole from the outside of the door, up the inside of the door and out the same 1" hole as the keypad cable.

With the chassis and keypad held in place, installing the inside rose assembly will hold everything together. Once the rose cover and inside lever are installed, the only thing left is the electronics chassis, (see photograph 16).



11. To adjust for door thickness, the outside rose should be removed, followed by two pins. Now the adjuster is free to spin.

The electronics chassis is held in place with two screws. One is a #10-32 machine screw with a star washer and the other is the small #6 screw mentioned earlier, (see photograph 17). The #10-32 screw passes through the door and mates with the post at the top of the keypad.

Before the battery cover can be installed, two things have to



12. With the old lock removed, you can see that part of the required door prep is already done.

happen. The first is the removal of the white tab that prevents the battery from making contact and powering the lock.

When the tab is removed, a single beep is heard and the yellow LED on the keypad should light for five seconds. This indicates that there are no user codes already entered in the

Continued on page 32



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Executive Pick Set



EPG-1

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NDPK-24

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Stainless Steel

I.D. Badge Pick Set



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COMP-1

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Royal Roll-Up™ Pick Set



NDPK Deluxe Pick Set

H 1

AKK-P17 Pocket Killer Kit

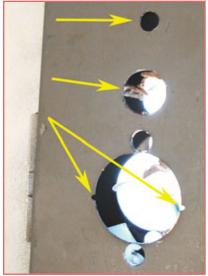


Marded Ladiock Lick 261

Continued from page 30

lock. If you don't get the five second yellow light, there is a reset procedure that will remove everything in the locks memory.

The second thing is to program the lock. Programming is done through the keypad, but there are two different types of programming.



13. Two more holes and a pair of notches are added to the door preparation.

The first is called "fixed programming" and is used if only one access code is required and will seldom be changed. The other type is "keypad changeable programming" and is used if there is more than one user or if any of the locks features are to be used.

The one code option is extremely simple. You press the "hard" button for one second and the yellow light will start to flash slowly on the keypad, (see



14. The last hole needed is used to attach the top of the electronics chassis to the door.



15. When placing the keypad on the outside of the door, be sure to pass the cable through the 1" hole.



16. After the inside rose and lever is installed, the electronics chassis can be connected.



17. Two screws hold the electronics chassis in place. The cable from the keypad and wiring for the drive motor can be attached.



photograph 18). At this point you have 30 seconds to start entering the code that you want to store in memory.

You can enter anything from two to seven digits. Once the first key is pressed, a delay of more than five seconds will kick the system out of program mode. If you make a mistake, just press the "hard" button again and start



18. A simple programming method is to use the "hard" button. This allows only one access code to be entered, but is very fast and easy to do.



19. The battery cover is held in place with one screw.



20. Here is the finished product as viewed from the outside.

over. This method is very fast and easy.

The keypad changeable programming mode is started by pressing the "prgm" button for one second. This time the yellow LED will flash fast instead of slow. Within 30 seconds, enter the prefix "00" followed by a five to seven digit code that you will use for programming. After the final part of the code is entered, press the "E" button or wait for five seconds. If you get two fast blinks of the red light, the system accepted your code as entered.

All of the rest of the codes can be entered from the keypad just like the program code was entered. You can have a total of 59 user codes. Prefix numbers 02-55 are regular user positions. They can be from two to seven digits long.

Prefix position 56-57 are used for passage mode operation. Positions 58-59 are used for lockout mode. There are several other functions that can be set into the programming of the lockset. They are used too set the passage time, delete users etc...

The battery cover is held in place with one Allen head screw, (see photograph 19). When the cover has been replaced, the job is done. I like the way the finished assembly looks. Both on the inside as well as from the outside, (see photograph 20). We have another happy customer and I can go home. Until next time, have a nice day.

For more information about the SABL or any other products from the Securitron line up, give them a call at 800-MAGLOCK. That's 1-800-624-5625, or 775-355-5625. You can also fax a request to 775-355-5636. To visit their web site go to: securitron.com. Circle 313 on Rapid Reply.

IK.





Ccess Security Products, Ltd. is launching its newest UL-listed modular product line-The TemperVault™. This innovative modular vault system offers the thinnest panels in the industry, but offers the strength one would expect from an aggregate panel, without all the weight.

TemperVault™ lightweight panels are constructed of technically innovative materials composed of high strength tempered concrete, metal fibers, and reinforcing rods. Unlike other modular systems that are light, but use wood fiber or organic materials that will deteriorate over the years, the TemperVault's™ extremely durable construction will stand the test of time.

The TemperVault™ will meet the need in the marketplace for those customers who cannot construct a vault conveniently on the ground floor of a building. In situations where a vault is needed on the upper floors of a structure, the weight of the vault becomes a major concern. Historically, many manufacturers have tried to satisfy the need for a lighter vault by constructing their panels using a wood or organic core. Unfortunately, as organic and wood materials deteriorate, so does the structural integrity of the vault, making it more susceptible to penetration and instability.

Access Product's use of technically innovative materials has produced the thinnest modular vault panels to ever **Underwriters** receive an Laboratory listing. The Class 1 panels are 2-1/4" thick, the Class 2 panels are 3-3/4" thick, and the Class 3 panels are only 7" thick. The total weight of the vault will be drastically reduced because the panels are thinner. Yet the tensile strength of the panels will test at a compression strength of 44,000 psi."

The capability to produce such strong, lightweight panels,

comes from an innovative manufacturing process. These panels are constructed of a scientifically derived mix of a special concrete base and metal fibers baked into a custom designed kiln over several days at temperatures which reach up to 485°F. This tightly controlled, temperatureregulated process of heating and cooling the panels over several days creates a dense, tempered panel of maximum strength. These panels are up to 60% lighter than other vault panels available in the market.

For the customer, these strong, yet compressed modular panels will reduce the vault footprint in their office's construction and make installations more cost effective, because these thinner panels are easier to handle and assembly time will be reduced.

ASSEMBLY

Shown in the staging area are Class 1 modular vault panels. (See photograph 1.) Each vault panel is 2.25" thick and weighs 37 lbs. per



1. Temper vault panels.

square foot. It is easy to handle and less costly to ship. Composed of high strength concrete, each panel has a compression strength of 44,000 psi.

Thinner panels result in minimized grade level for greater ADA compliance. (See



2. Vault floor installation.

photograph 2.)

The two assembly options for the TemperVault[™], which either bolt-together or are welded. (See photograph 3.) Each of the lightweight panels make for an unprecedented quick assembly that can reduce vault installation by several days compared to standard conventional vaults.

The vault is ready for finish out by other project contractors: drywall hangers, electricians, etc. (See photograph 4.)

Tom Burke of Defiant Safe Company of Dallas, who is the



3. Vault wall assembly.



4. Completed vault.



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first to install a TemperVault™ in the U.S. market noted, "Setting up a TemperVault™ system for one of our clients was one of the easiest installations we've ever done. Typically, we specialize in safe installations, but we see a great future in working with this modular system, and see a great market for clients who have such a need for a system such as this."

Eric Mueller, President of Bridgeman Security Equipment, a national security products firm based in Los Angeles, commented on the introduction of the TemperVault™ saying, "In a major city such as ours, the demand for such a product has been there for a very long time, but the problem was that the products out there were either still very heavy, required a larger footprint than most clients have room for, or there was a concern about a vault's longevity due to its construction. TemperVault™ is the answer to all

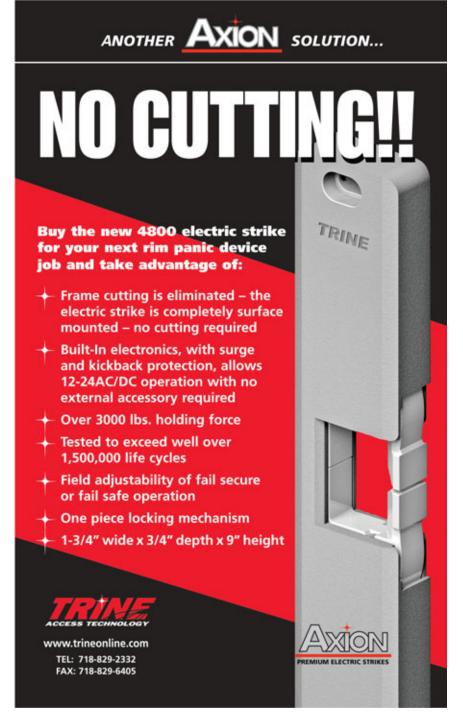
those client concerns. We are excited to be one of the first companies on the West coast to carry this modular vault product line."

An additional bonus to this product is that you can be extremely flexible in configuring a vault design. Vaults of almost any size can be constructed. Standard size panels are available and alternative sized panels can be produced to the exact dimension required to meet the specific measurement of the proposed vault configuration. The vault door and HVAC ports can be placed in virtually any location. New panels can be used to retrofit older vaults or other existing structures in order to increase level of protection.

With this panel system, a great advantage is that it can be welded or bolted together. This is great for those clients who have offices in high-rise or confined structures where the imposition and the smoke from a welding process is of concern.

The TemperVault[™] fits a void in an industry niche which has long existed. Unlike years ago when only financial institutions were looking to vault products to protect safe deposit boxes and other bank assets, there is now a need for vaults in many businesses and industries wherever a large amount of cash and valuables are to be stored. These include jewelry stores, brokerage firms, educational institutions, government facilities, sports stadiums, retailers, manufacturers, healthcare facilities and entertainment complexes. The Temper Vault™ fits the bill for a flexible vault product that was not available in the market, until now.

For more information on the TemperVault™, contact Access Security Products Ltd. at 1-800-268-9033 or email to info @access-safe.com.



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#GLSF-08 #GLSF-08S #GLSF-10

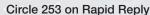
Small Electronic Safe Slotted Electronic Safe

Large Electronic Safe

13 3/4" x 10" x 10"

13 3/4" x 10" x 10"

15" x 12" x 12"





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by Michael Hyde & Brook Francisco



2003 Toyota Matrix

— Part 1 —

A new body style, but no transponder



The new Matrix has a new body style, and is the cousin to the Pontiac Vibe. The chance you will run into one of these is very high, and you need to be prepared to make money and fast work of this car. There is no transponder system on this car. Since this car uses the new Toyota code series, you will need accurate and precise code cutting equipment.





3 We used an Air Wedge to open the door up enough to slide in the long reach tool.



5 The inside door lock opens easily with the tip of tools makes contact with it.

The new Matrix uses cables for linkage rods and is well shielded. For this car we are going to use a Long Reach tool to unlock the car.



We inserted a wedge and used a piece of cardboard on the backside of the wedge so it doesn't mark the black plastic trim on the rear doorframe before we inserted the Air Wedge.

DOOR LOCK



6 The door lock cylinder sits alongside the outside door handle. It is not necessary to remove the door panel.

Continued on page 40

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7 On this car the door lock cylinder is held in a by a #30 Torx bolt. Remove the black plastic cover to access the Torx bolt.



The Torx bolt is held in place by a plastic clip. Therefore you do not need to remove the bolt from the car.



The cylinder is held in there snugly and thus takes a little wiggling to slide it out.



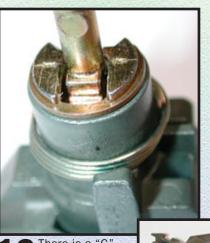
There are two sets of numbers on this lock. The upper one is a production code; the lower one is the code. The code is found only on the passenger door cylinder. The new Toyota code series is 50,000 thru 69,999.



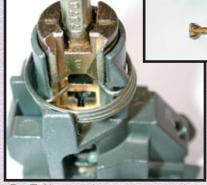
The lock cylinder painted plastic face cap will need to be removed. Gently unsnap the clip from the bolt side as seen in the picture or you risk breaking the cap.



12 The metal face cap will have to be removed and must be reused when you re-assemble the lock cylinder.



13 There is a "C" clip that secures the cylinder plug.



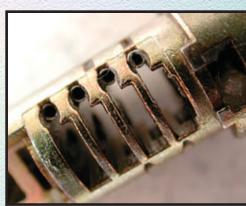
14 You may have to remove the return spring to aid in the removal of the cylinder plug.



15 Once the face cap and the "C" clip are removed the cylinder will slide right out.



16 The door lock cylinder plug contains 8 out 10 tumblers in positions 3 through 10.



17 The Matrix uses the new Toyota code series and thus has the new tumblers and tumbler arrangement. Each tumbler chamber holds 2 tumblers that go in opposite directions.



18 Here is a view of the disassembled door lock cylinder.

In the next installment we conclude with the ignition lock, trunk lock and glove box lock.

TIL

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Year: 2004

Linkage: Horizontal **Pick:** CW DSO

Tool: AO-34 "MCOT-Narrow Tool"

PREFERRED OPENING METHOD

This is a new model for 2004. This vehicle has cable linkage in all doors.

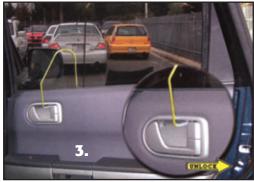
- **1.** Insert a Pump Wedge at 12" from the front edge of the window glass of the <u>rear passenger door</u>. Inflate wedge.
- **2.** Insert an AO34 "MCOT-Narrow Tool" at 9" from the front edge of the window glass, tip facing forward. (Photo 2)
- **3.** Lower the AO34 into the door cavity and rotate the tool beneath the bottom edge of the window glass. Deflate wedge.
- **4.** Lift the tool, gradually working the tip of the tool into the vehicle interior. Rotate the tool 45° counter-clockwise and position the tip of the tool in front of the manual lockunlock button. (Photo 3)
- **5.** Rotate the manual lock/unlock button rearward to unlock the door.



ALTERNATE OPENING METHOD

- **1.** Insert a Pump Wedge at 11" from the rear edge of the window glass of the <u>front passenger door</u>. Inflate wedge.
- **2.** Insert an AO33 "MCOT-Separator Tool at 3" from the front edge of the window glass, tip facing rearward. Insert an AO35 "MCOT-Wide Tool" at 10" from the front edge of the window glass, tip facing forward.
- **3.** Lower both tools into the door cavity and rotate beneath the bottom edge of the window glass. Deflate wedge.
- **4.** Lift the AO33, gradually working the tip of the tool into the vehicle interior. Lift the AO35 into the gap created by the AO33. Rotate the AO35 45° counter-clockwise and position the tip of the tool in front of the manual lockunlock button. (Photo 4)
- **5.** Rotate the manual lock-unlock button rearward to unlock the door.







For more information on PRO-LOK's manual entitled, The Best Damn Car Opening Manual Period, Contact: 714-633-0681

FORD • Contour 95-00

Year: 1995–2000 Linkage: Horizontal

Pick: CCW

Tool: AO-18 "Spring-L Tool"



PREFERRED OPENING METHOD

This model was introduced in 1995 to replace the Tempo. This model opens the same as a Mercury Mystique. This model was discontinued in 2001.

1. Insert a wedge at 6" from the rear edge of the window glass of the <u>rear</u> passenger door.

2. Insert an inspection light into the door cavity at 5" from the rear edge of the window glass and identify the protected latch.



91/2" into the door cavity. Rotate the tool 90° clockwise. Lift the tip of the tool under it contacts the bell crank at the bottom of the protected latch.

(Photo 3)

5. Continue to rotate the tool clockwise to activate the bell crank to unlock the door.



ALTERNATE OPENING METHOD

1. Insert a wedge at

9" from the front edge of the window glass of the <u>rear</u> <u>passenger door</u>. Inflate wedge.

2. Insert an AO35 "MCOT-Wide Tool at 12" from the front edge of the window glass, tip facing forward.

3. Lower the AO35 into the door cavity. Rotate the tool beneath the bottom edge of the window glass. Remove the wedge.

4. Lift the tool, gradually working the tip of the tool into the vehicle interior. Rotate the tool 30° counter-clockwise and position the tip of the tool behind the interior pull handle or lock-unlock button. (Photo 4)

5. Pull the pull handle or lock-unlock button to unlock the door.

LEXUS • ES330 04

Year: 2004 Linkage: Horizontal

Pick: CW DSO High Security
Tool: A0-34 "MCOT-Narrow"

PREFERRED OPENING METHOD

This vehicle is a new 4-door sedan for 2004. Replaces the ES300.

1. Insert a Pump Wedge at 11" from the front edge of the window glass of the rear passenger door. Inflate wedge.

2. Insert AO34 "MCOT-Narrow Tool" light into the door cavity at 8" at 6" from the front edge of the window glass. <u>Tip facing</u> forward. (Photo 2)

3. Lower the AO34 14" into the door cavity. Rotate the tool beneath the bottom edge of the window glass. Deflate wedge.

4. Lift the tool, gradually working the tip of the tool into the vehicle interior. Rotate the tool 90° counter-clockwise and position the tip of the tool in front of the manual lock-unlock button. (Photo 3)

5. Rotate the lock-unlock button rearward while lifting the door handle at the same time to unlock the door. Use remote to turn off alarm.

ALTERNATE OPENING METHOD

1. Insert a Pump Wedge at 14" from the front edge of the window glass of the front passenger door. Inflate wedge.

2. Insert an AO34 "MCOT-Narrow Tool at 6" from the

front edge of the window glass, tip facing forward.

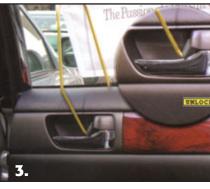
3. Lower the AO34 into the door cavity. Rotate the tool beneath the bottom edge of the window glass. Deflate wedge.

4. Lift the tool, gradually working the tip of the tool into the vehicle interior. Rotate the tool 135° counterclockwise and angle the handle of the tool <u>forward 45° to position the tip in front of the manual lock-unlock button</u>. (Photo 4)

5. Rotate the lock-unlock button rearward to unlock the door.









Framon, #2-D by Sal Dulcamaro, CML

hen I started in locksmithing almost 30 years ago, I first cut keys by code using depth and space keys. After about a year or two I managed to find someone selling a used Framon #1 Code Machine, and I started cutting keys by code with precision. I used that machine for a few years and sold it for the same price I bought it for. I sold it because I was finally able to

1. The Framon Model #2-D.



2. A closer look at the cutter and vise.

get my hands on a new Framon #2 Code Machine.

What distinguished the new #2 from the older #1 Code Machine is a tilting head for cutting Medeco keys. I still own a Framon Machine, along with many other code and duplicating key machines. Both the model #1 and #2 worked somewhat like a machinist's milling machine with micrometer controls for both depth and spacing.

Between the introduction of the #2 machine and now, Framon introduced a computerized code machine. I'm not going to discuss the computerized machine now, but rather the more recent intro-



3. Unlock the head and tilt it one way or another.



4. After tilting the head, lock the cutter head to the correct angle.

duction of the Framon Model #2-D. (see photograph 1). The model 2-D is the next generation to the #2 machine and is a manually operated code machine. The biggest distinction between the new #2-D and the earlier #2 is the simplicity and speed of operation. A closer look at the cutter and vise of the #2-D, shows that it is constructed similarly to the #2, (see photograph 2). I have a fairly old model #2 and the base of my code machine is wood, while the base of the newer #2 code machines are made of metal. For tilting the head to cut Medeco angled cuts, you will need to unlock the head and



5. The digital readouts indicate both spacing and depth dimensions.



6. A space cam allows for quick space positioning using click stops.

tilt it one way or another, (see photograph 3). After tilting the head you move the bar to the left (arrow to the left indicates Tighten) to lock the cutter head to the correct angle for making Medeco key cuts, (see photograph 4). The motor must be turned off whenever you change the cutter head angle.

I wouldn't dream of being without my Framon code machine. When I have to cut ASSA (or other extremely tight tolerance) keys, I will only trust my Framon machine because the blanks are too expensive to rely on other less precise machine.

DIGITAL READOUTS

The Framon Model 2-D Code Machine replaces the old style micrometer controls with electronic Digital Readouts (called DRO's). The digital readouts on the machine indicate both spacing and depth dimensions for key cutting specifications, (see photograph 5). The new DRO's of the model 2-D make the Framon machine a much faster and simpler to use code machine. Where teaching an assistant or trainee how to read a micrometer might be a bit awkward, showing someone how to read the digital readouts would not be difficult at all. With the Framon depth and space book, you should be able to cut most varieties of keys by code with the #2. The threaded cranks still move .050 inch per crank rotation, but now you just read the digital display to keep track of how many times you turned the crank. This new digital display makes the Model #2-D more competitive in the area of speed and simplicity, while being a much more precise a machine than some others.

Another innovation of the Model #2-D are the Depth and Space Cams. A Schlage space cam allows for quick space positioning using click stops instead of dialing to a specific dimension, (see photograph)

6). While it's not price effective to own depth and space cams for every brand lock, it would be smart to own the sets that match lock brands that you use most. That would prove especially useful when setting up a master key system.

There is a small storage drawer just below the machine that holds items such as wrenches for the machine, key tip stop, and even



7. There is a small storage drawer just below the machine.



8. The crank handles are detachable.



9. A depth cam and view of the digital readout.



10. The Framon machine features a straight inward plunge cut.

spare batteries for the digital displays, (photograph 7). The crank handles are detachable for use when you are using depth and space cams for setting cutting dimensions, (see photograph 8). A close-up view of a Schlage depth cam also shows a view of the depth digital readout, (see photograph 9). It is set to the Schlage "0" depth of .335 inch. There is an inch/metric conversion button, an on/off switch and a zero reset button. If the power goes out you can use a spare battery in the drawer or just replace them with ordinary watch batteries. To save battery life, it is best to turn off the displays when not in use. The position of the machine is retained even when the key vise is moved and the display power is off.

One of the keys to the precision and accuracy is the straight-in feed method of key cutting with the Framon code machine. You can see the cutter is directly in line with the key vise, therefore key cutting is a straight inward plunge cut without any tilting angle to misshape the bottoms of your key cuts, (see photograph 10). Precision keys like ASSA high security keys are very touchy about this. I have only been able to reliably cut ASSA keys with my Framon code machine. Using other code machines has been hit or miss, and with the price of ASSA key blanks it can be unnecessarily expensive and time consuming using a code machine that isn't a straight in feed.

You will generally find a strong loyalty with locksmiths who own Framon code machines. That is not only for the initial quality and reliability represented by the Framon name, but for the exceptional customer service on the rare occasion that something goes wrong with your machine. The Model #2-D is an impressive machine.

For more information, contact your local supplier or Framon at: 989/354-5623. Circle 314 on Rapid Reply.

NEW AND UPDATED LA GARD SAFE LOCKS

2004 has been an exciting year for LA GARD. They have a number of new products they have introduced as well as updates to their current product line. The LPAUDIT, PRIVAT^{II}, and SMARTLINC, are just a few offering new features and benefits to end-users.

LA GARD LPAUDIT INCREASES CONTROL

With the upgraded lock software, which includes a controller code feature and the introduction of the new eKEY^{II}, the LPAUDIT offers additional control and ease of use. The new keypad design offers an outside battery compartment. The LPAUDIT can be used in conjunction with LA GARD's internal battery box or battery alarm box for

use with the time delay feature or standard alarm features.

Designed after their popular LPAUDIT, the new LPAUDIT offers all the features of the LPAUDIT along with newly added features. The new LPAUDIT lock software offers

an update to the original LPAUDIT software with the addition of the Controller Code, which enables the user to add, delete, enable, and disable the manager as well as retrieve the audit trail. The LPAUDIT allows up to nine users, time delay override, audit trail, silent signal alarm and their new eKEYII with an improved design for ease of use.

LA GARD'S COMPLETELY PRIVATE ELECTRONIC ENTRY

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TCode-1C	Chrysler-Dodge-Jeep-Plymouth '98-'03 (b)	\$500.00
TCode-1M	Mitsubishi 2000-2004	\$600.00
TCode-1N	Nissan & Infiniti 1997-2004 (c)	\$1,200.00
TCode-Catera	Cadillac Catera 1997-2001	\$600.00
TCode-VW	Audi & VW Software (d)	\$600.00
TCode-1V	Audi & VW Software PIN Read (e)	\$315.00
TCode-2C	Chrysler CAN, Pacifica & Remotes	\$500.00

Version 2.45 includes all other Chrysler CAN vehicles: 2005 Chrysler 300, 300-C, '04-'05 Dodge Durango, '05 Dodge Dakota, Magnum, and 2005 Jeep Grand Cherokee.

TCode-1T Lexus & Toyota Keys & Remotes \$600.00

- (a) Ford CAN systems are used on '03-'04 Focus (2.3L), '04 Explorer, '04 Sable/Taurus, '04 F150 (New Body)
- (b) Will also work on 2004 Models except Minivans, Pacifica & Durango
- (c) Some 2003-2004 models require PIN Code conversion -**Call Tech Support for Conversion**
- (d) Will not work VW CAN Systems 2002 & up A8, 2004 Touareg & 2004 Phaeton
- (e) Works on 2000-2001 Audi A6, VW Golf & VW Jetta models



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Continued from page 46

Mechanical locks, the PRIVAT II offers the ultimate in electronic lock security.

The PRIVAT II features an LCD readout that prevents unauthorized viewing during code input as well as accommodating right or left hand programming and code entry. Approved for use by the Australian Government, the new PRIVAT^{II} can be used with all of LA GARD's electronic locks leaving the mix and match options entirely up to the individual user. The PRIVATII uses one usersupplied 9V alkaline battery installed in the outside battery compartment for easy access.

The PRIVATII is one of the most user-friendly products available from LA GARD. The ability to use PRIVATII with any of the locks in the LA GARD product line is an enormous advantage for everyone.

LA GARD'S SMARTLINC MULTIPLE **DOOR SAFE LOCK**

SMARTLINC provides the capability of managing up to five independent locks in a multi-compartment safe. A manager, and as many as eight additional users, can be assigned to each of up to five locks.

Having the ability to control multiple locks through a single keypad allows for simplified programming of the locks and easier access to the various inner compartments. A single keypad managing all locks will also greatly reduce the costs for each unit compared to what's available in the marketplace today.

For added security, default lock codes have six digits (with an option to program



Continued on page 50



Now you can mark keys, lock tumblers, tags, social security plates and small parts with identification numbers and letters easily and economically. NUMBERALL manufactures and services a complete line of marking equipment from one character hand stamps to motorized automatic marking presses.

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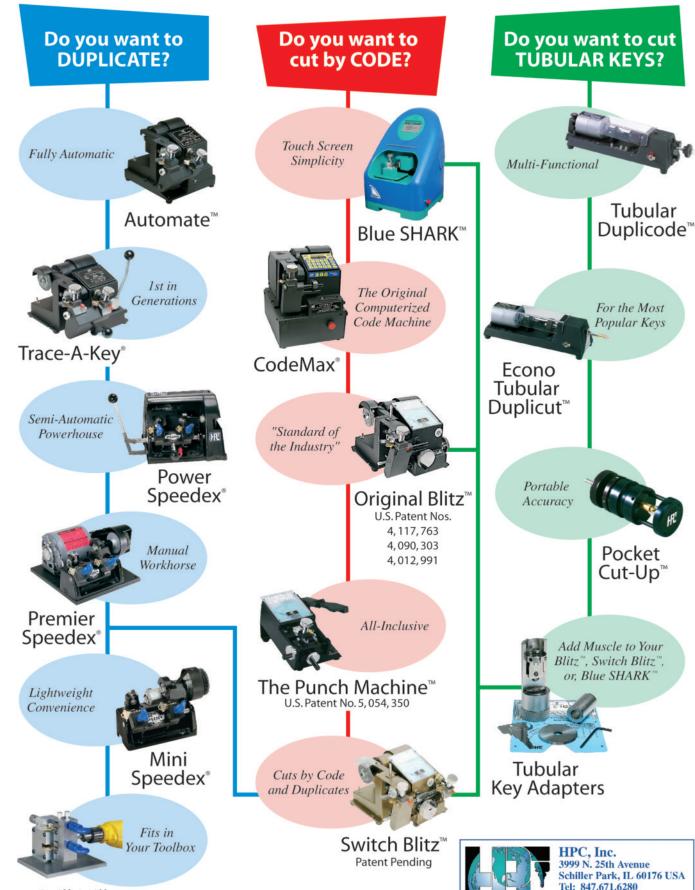


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U.S. Patent No. 6,003,164

Continued from page 48

the lock for seven-digit use), and the safe lock can be optionally equipped for a silent signal (duress) alarm. The installation of this option also allows the lock to be deactivated while the alarm system is "ON," with access denied until the alarm system has been turned "OFF." Additionally, it can offer the capability of denying access remotely.

Each lock can be programmed for time-delayed access. The customized time delay can be programmed from one to 99 minutes, while the open period can be set for one to 19 minutes. Every operation, or program change, is recorded in the audit information.

Time Delay Override is an important feature of the SMARTLINC unit, especially within the commercial market. Use of this feature allows armored couriers to have immediate access, when programmed, after a manager enters his or her authorized code.

Other SMARTLINC features include, audit trails of the last 500 operations for each lock, including user, date, and time, access via PIN plus eKEY^{II} mode (optional for each lock), dual code access (optional for each lock), lock bolt status monitoring (indicates in audit, or via customer's connected alarm monitoring, when lock bolt was withdrawn and when it was extended) and time lock.

SMARTLINC's ability to offer different time lock periods on each lock allows users greater flexibility. Time lock options include Standard Week (with up to four open periods per day), Special Events (up to 20), Immediate Time Lock, Temporary Time Lock, and Time Lock Open Period Extension (allows for additional two-hour time lock "open" time).

For more information about LA GARD products, call (310) 325-5615, visit LA GARD'S website at www.lagard.com, or request information through LA GARD's 24-hour Fax-On-Demand toll-free request line at (877) LAGARD2 or (877) 524-2732.

ΠL





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So jazz it up with Access 800. And enjoy the sound of security.



by Billy B. Edwards Jr., CML

aster Lock Co. cylinders use a plug that is .397" in diameter and a .0155" increment of cut for the keys. The combination of those two specifications mean that we have a single step system. Considering that factor, and that we have eight increments, the master keying potential is huge.

Even in our four pin cylinders the key system potentials are pretty large. With seven progressives in each chamber, once you apply the MACS and eliminate combinations that would require a number 1 master pin it gets down to around 150-200 change keys total. That is a pretty good potential for a four pin cylinder.

Six pin cylinders are much more dramatic. The theoretical potential is over a hundred thousand change keys in a single key system. Of course the MACS and the master pin rule cut that down to between 12,000 and 23,000. Still not bad and in most pin tumbler locks you can only get to that capacity using multiplex keyways.

As with all key systems, when you add levels of keying you start dividing up that large number. We offer up to five levels of keying in a master keyed system and we have

a key system service available for a nominal fee that can generate a system with our MACS and and if you request a system only, Master Lock doesn't retain a copy.

The first line in the document is the Top Master Key name and combination. That is also the top line in the pinning matrix on that first page, (see example 1).

The pinning matrix was the invention of Ken Ehrenreich and

master pin rule already applied. Naturally with that many potential key bittings involved the system will be supplied only in an electronic format on a floppy if it will fit, on a CD-ROM or via email. All key system bitting lists are supplied as a MS Word document

3		2		0)	4		7		5	•
0	3 0	0	2	0	- 0	0	4	0	7 0	0	5
1	2	1	1	1	1 0	1	3	1	6	1	4
2	1 2	2	- 2	2	2	2	2 2	2	5 2	2	3 2
3	- 3	3	1 2	3	3 0	3	1 3	3	4 3	3	2 3
4	1 3	4	2 2	4	4	4	- 4	4	3 4	4	1 4
5	2	5	3 2	5	5 0	5	1 4	5	2 5	5	- 5
6	3	6	4 2	6	6	6	2 4	6	1 6	6	1 5
7	4 3	7	5 2	7	7 0	7	3 4	7	7	7	2 5

Example 1.

each pinning matrix applies only to the TMK combination listed at the top of the form. We use standard locksmith software to generate the pinning matrix, capture it from the screen and paste the image into the bitting list document. We have found it to be a pinning specification that is very easily understood and used. For those not familiar with it, here is how you use it.

Print only the first page from our bitting list and that will get you a copy of the pinning matrix. Next, get six give away key rings. For example, if you were wanting to pin a cylinder to 17AA in the bitting list you would use the GAK's to circle the combination 054621 on the pinning matrix as shown in example 2.

3		2		0		4		7		5	;
0	3 0	0	T 2 0	0	T - 0	0	4 0	0	T 7 0	0	T 5
1	T 2 1	1	1 1	1	1 0	1	T 3 1	1	6 1	(1	T 4 1
2	T 1 2	2	T - 2	2	T 2 0	2	T 3 1 T 2 2	2	T 5 2	2	T 3 2
3	T - 3	3	1 2	3	T 3 0	3	1 3	3	T 4 3	3	T 2 3
4	T 1 3	4	T 2	4	4	4	T - 4	4	T 3 4	4	1 4
5	T 2 3	5	2 T 3	5	T 5 0	5	1 4	5	T 2 5	5	T - 5
6	T 3	6	T 4 2	6	T 6 0	6	T 2 4	6	T 1 6	6	T 1 5
7	T 4 3	7	T 5 2	7	7 0	7	T 3 4	7	T - 7	7	T 2 5

Example 2.

3		2		0		4	Ļ	7	•	5	;
0	3 0	0	7 2 0	0	T - 0	0	T 4 0	0	7 0	0	T 5 0
1	T 2	1	T 1	1	1 0	1	T 3	1	6 1	(1	T 4
2	T 1 2	2	T - 2	2	T 2 0	2	T 2 2	2	T 5 2	2	T 3 2
3	T - 3	3	T 1 2	3	3 0	3	T 1 3	3	T 4 3	3	T 2 3
4	T 1 3	4	T 2 2	4	T 4 0	4	T - 4	4	T 3 4	4	1 4
5	T 2 3	5	3 2	5	T 5	5	T 1 4	5	T 2 5	5	T - 5
6	T 3	6	T 4 2	6	6 0	6	2 4	6	T 1 6	6	T 1 5
7	T 4 3	7	T 5 2	7	7 7 0	7	3 4	7	T - 7	7	T 2 5

Example 3.

As you can see, when the combination is circled the smaller numbers beside it are circled also. Those smaller numbers indicate the exact pinning required in the pin chamber to let the TMK and 17AA operate. The bottom number is the size of the bottom pin, the middle number is the size of the master pin and in our case the 'T' at the top indicates to use our standard driver since we don't use graduated drivers. The pinning for the cylinder is;

334254 = master pins 020421 = bottom pins

Once that combination has been pinned into a cylinder and you need to move on to the next combination it is a very simple process, just move the required GAK's. Our next combination is 18AA and we can see from the bitting list it is only different in two cut positions, the third and fifth cut positions. That means we must move the third GAK from the number 4 depth to the number 7 depth and the fifth GAK from the number 2 depth to the number 1 depth as shown in *example 3*.

Again, all Master Lock needs to produce your key system requirements is a detailed specification.

For more information contact: Master Lock Company; Phone: 414-571-5625; Fax: 414-766-6333; E Mail: masterlock@mlock.com; Web: www.masterlock.com.

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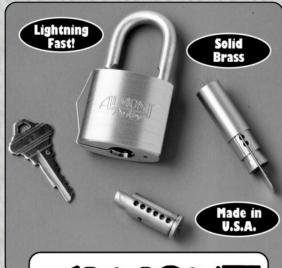


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No.10

November 2004 • 53

Sargent "LA"

RROW "Assembly Chart

XPLODED

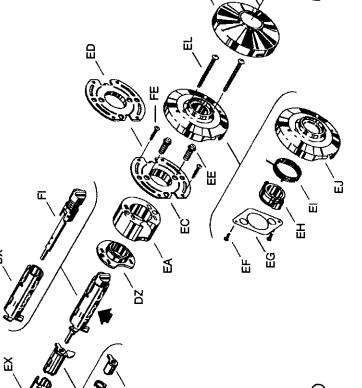
Exterier Lock (Lever)

■ Outer lever is locked by pushing turn button in inner lever, then key uesd in outside lever to open **OPERATION**

■ Rotating inside lever releases outside lever.

■ By turning inside button outside lever remains locked.

Deadlocking latch.



몺



Use light grease for lubrication where indicated by arrow.



ᇤ

RROW*Parts Index

			ű	SVC Ng Si					Ú٨	C)	10	N					
SYM	PART No.	DESCRIPTION	MOI	¥ 65	M607	8038	 	2 <u>4</u>	<u>~</u>	7 3	10 34	¥1.7	2	52	303	28	M35
DP	MS-34	Spring guide	•	•	•	1	•	•	•	•	•	•	٠	٠	•	•	•
DQ	MS-38	Outside bearing assembly	•	٠	•	Г	•	•	•	•	•	•	٠	•	•	•	•
DR	1001-47	Locking slide spring	٠	٠	٠		٠	٠	٠		•	٠	٠	٠	•	٠	•
DS	1001P-29	"P" locking slide	٠	•	٠		٠		٠	٠	٠	٠	٠	٠	٠	٠	٠
DT	1001-36	Retractor spring	•	•	•		•	•	•	•	•	•	•	•	•	•	•
DU	MS-33	Retractor	•	•	•	:	٠	•	•	•	•	٠	•	•	•	•	•
DV	K-179	Latch housing sleeve	•	•	•	i	٠	•	•	•	•	•	•	•	•	•	•
DW	SEE PAGE 30	Spring latch	•	•	Г												
DX	1001-10A-SR	Inside tube assembly	٠	٠	٠			•	•	•	٠	٠	•			-	
DY	1001P-17AA	Push button assembly	Г	•					•							ī	_
DZ	MS-08A	Inside bearing sleeve assembly	•	٠	٠		•	•	•	٠	٠	•	٠		•		
EA	MS-07	Main housing	•	٠	•		•	•	٠	٠	٠	٠	٠	٠	٠	٠	•
EB	152-06	Catter pin	•	•			•	•	•	•	•	•	•	•	•	•	•
EC	MS-28	Inside support plate	٠	•	٠		٠	•	•	4	•	•	•	•	•		•
ED	MS-28-1 3/8	Inside support plate	•	•	•		•	•	•	•	٠	٠	٠	•	•	•	•
EE	MS-57	Hollow screw	•	•	•		•	•	•	•	•	•	•	•	•	•	•
EF	4-40 X 1/4	Tapping screw	٠	•	•		•	•	•	•	٠	•	•	•	•	•	•
EG	MS-27	Covering plate	٠	•	•		•	•	•	•	•	•	•	•	٠	•	•
EH	MS-12	Spring arbor	٠	•	•		•	٠	•	•	•	•	•	•	•	•	•
Εl	MS-05	Spring	٠	•	•		•	•	•	٠	•	٠	٠	•	•	•]	•
EJ	MS-04	Inside rose insert	۰	٠	٠	٠	•	٠	٠	•	•	•	٠	•	•	•	٠
EK	MS-52	Outside rose insert	٠	٠	•	•	•	•	•	•	•	•	•	•	•	•	•
EL	8-32 X 2-1/8	Screw	٠	٠	•	•	٠	•	•	٠	•	•	•	•		٠	•
EM	MS-03	Rose scalp	٠	•	•	•	•	•	•	•	٠	•	•	•	•	•	•〕
EN	MS-14	Bushing	•	•	٠		•	•	٠	•	٠		•	٠	٠	•	•
EO	HS-46	Cylinder retainer	•	٠	•	•	•	٠	•	•	٠	•	•	٠	•	•	•
EP	SEE PAGE 28	Plain handle assembly	٠		•	•		٠				٠					
EQ	MS-29	Outside support plate	٠	•	٠		•	•	•	•	•	٠	•	٠	•	•	•
EΒ	MS-29-1 3/8	Outside support plate			•		•	•	•	•	٠	٠	٠	•	•	•	•

								F	Uħ	C	10	N					
SYM	PART No.	DESCRIPTION	MO	70FW	7088	BON	7	<u> </u>	 3	712	Wife	ž	130	70	M32	\$C#4	M35
ES	MS-32	Spacer	•	•	٠		٠	•	•	•	٠	٠	•	٠	٠	•	•
ET	SEE PAGE 28	Cylinder and button lever handle assembly	Γ	٠	i	-	•	•	•	•	•		•	•	٠	•	•
ΕU	1007-41A-SR	One ear tube assembly		٠	•				Г					Г		Γ	
EV	SS1001-45A	Key cam release assembly		•			•		٠	•					٠		
EW	1001-62A	Locking plug assembly		•	•		•	•	٠	•					٠	٠	
EX	1001-41A-SR	Outside tube assembly					•	•	•	•	•				•	•	П
EY	SS1001F-45	"F" key cam		i				•			٠					٠	
EZ	*	Ernergency key		٠						•							
FA	1007-48A	Emergency rod tube assembly		٠		Γ	Γ										
FB	1001PT-51A	Emergency button assembly		•			Г										П
FC	HS07-45	'NX" key cam release			٠												
FD	MS09-31A	Lever pull assembly				•											
FE	SEE PAGE 29	Sheet metal screw	٠	•	٠	٠	•	•	٠	٠	•	٠	•	•	٠	٠	•
FF	*	Cylinder unit				-	•	٠	٠	٠	•	٠	•	•	٠	٠	•
FG	*	Key blank				Г	•	•	•	•	٠	•	٠	٠	٠	•	•
FH	1001PT-17AA	Push and turn button assembly								•							
FI	1001-17AA	Turn button assembly				Γ	•										П
FJ	HS07-66	Lever catch plug			٠		_										
FK	1001H-17AA	Hotel button assembly						!			•						
FL	1001H-62A	Hotel plug and locking piece assembly									٠						
FM .	1001-42A-SR	Inside bearing sleave assembly					Ĺ							•		•	•
FN	SEE PAGE 30	Deadlocking latch			٠		•	•	•	٠	٠	٠	•	•	•	•	•
FO	1001S-41AA-SR	Cam tube and plug assembly										•		•			
FP	1001T-17AA	Push button essembly											٠				
FQ	1001T-41AA-SR	"T" lever tube assembly											٠				
FR	1001DCF-41AA-SR	"DCF" tube assembly													٠		
FS	1001DCF-64A	"DCF" plunger assembly													•		
FT	1001G-41A-SR	"G" lever tube assembly															•
FU	1001G-64	"G" locking bar															•

^{*} For information see Cylinder & I.C. manual

SYM	PART No.	DESCRIPTION	MO1	Moz	708 NOS	¥	r	.000	1 A			91M	.cw	M32	M33	M35
FV	SEE PAGE 28	I. C. cylinder handle assembly				٠	٠	•	•	•	٠	•	٠	•	•	•
FW	HSCR-41A	I. C. one ear lever tube assembly						•	•	•	ļ			•	•	_
FX	HSCRT-41AA	I. C. lever "T" cam tube and plug assembly								Г		•			Т	
FY	HSCRS-41AA	I. C. lever "S" cam tube and plug assembly								T	٠	П	٠			:
FZ	HSCRDCF-41AA	I. C. "DCF" lever tube assembly	П		Т	Τ		İ						•		
GA	HSCRG-41AA	I. C. lever "G" cam tube and plug assembly						i								•

BEGINNER'S ORNIER'S ORNIER Transponder Tools You Will Need



by Ken Holmlund

ast month I wrote about the basics of transponders and defined several terms that will appear in transponder articles and information. If you find terms you don't understand, or if you did not read that article, I suggest going back to the last issue and reading the information before going forward with this one. It will definitely make things less confusing, because transponder terms can be just that, confusing.

The transponder field and technology is changing so rapidly that it is impossible to keep up with in this format. What I will do here is cover some of the tools available at the time of the writing of this article. If you find you would like to know more about any tool you read about here, please contact the manufacturer listed at the end of this article or ask your wholesale supplier.

Even if you do not plan on getting into transponders with both feet, but you do cut keys, it is a good idea to have a way to tell if the key the customer is asking you to copy is a transponder. I know that many of them can be determined by just looking at the key—Chrysler transponders are gray (usually) and Fords will have a small window in the top of the



Photograph 1.

head (again, usually). To be completely sure, you should have a tool to determine the existence of a transponder in the customer's key and equally as important, in the key you will cut for them.

Just such a tool is available from a couple of sources. Ilco makes the TD3A (see photograph 1), and the TD3A-II. The TD3A-II is an updated version of the TD3A, and the best part of the new tool is that it can be hooked to your computer for upgrades when they become available. It can also read the new encrypted blanks. If you have the TD3A, it will do the job just fine, but if you are just buying the tool, get the TD3A-II. Both tools work



Photograph 2.

the same way. You just turn it on and insert the key into the opening. It will tell you if the key is a transponder and what manufacturers transponder is in the head. The TD3A reads Megamos, Phillips, Temic, Motorola and Texas Instrument transponders.

Jet Hardware makes a similar tool called the TKD-1 (see photograph 2). To use the TKD-1, simply insert the key into the slot and push the red button for a few seconds. It detects Megamos, Megamos Crypto, Nova, Phillips, Temic, Texas Instrument and Texas Instrument Crypto transponders.

Continued on page 58

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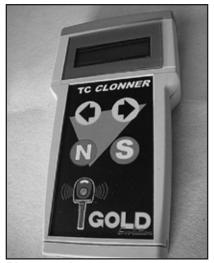
Continued from page 56

Another step that can be taken if you choose not to purchase the programming equipment is to clone keys. Here again, several tool options are available, including the ASP TC CLONER GOLD (see photograph 3), the Jet Hardware ETD-1 and ETD-1-JR (see photograph 4), the Ilco RW2, and the STRATTEC QUICK CODE.

All of these tools have the same basic method of operation. You insert the key into the machine and it reads the information stored in the transponder. You then remove the key and insert the new zero value key blank into the machine and it transfers the information to the new blank. Cloning keys can only be done to a few makes of automobiles, and is therefore not a large part of the business, but should be considered if you want to be in the transponder business. Your investment in these machines will run from \$600 to \$900, depending on what you get and what you want it to do. The RW2 has software available to enable you to connect to your PC and then you can set up customer files and print them as well. You can also update with annual new version releases. It runs on 12 volts DC.

The Jet ETD-1 also has software available to store vital customer information. Once that is done, it enables you to make additional copies of the customer's key without the customer's original key or car. It can run on a 9-volt battery so it is completely portable. It can also be used to detect the presence, or lack of a transponder in the key.

The TC CLONER GOLD is used to read, identify and copy keys that are not crypto from the makers of Temic, Phillips, Megamos and Nova. It gets its



Photograph 3.



Photograph 4.

power from a 110-volt connection through a transformer. Other methods are available with specially purchase cables.

The STRATTEC QUICK CODE has all the bells and whistles of the above machines with the additional feature of being able to read keys without removing them from the key ring. It comes with a USB and RS232 interface for linking to your computer, allowing for high-speed data transfer.

You must be aware that special key blanks are needed to clone keys. They must be the zero value blanks that typically are designated with a 5 at the end of the number from Ilco, i.e. B97-PT5 or an N in the case of Jet blanks, i.e. GM-97-N-PHT.

At the time of this writing, Jet was advertising that they have a machine that can clone the, until now, uncloneable Ford H72



Photograph 5.



Photograph 6.

blank. They call it the Smart Clone and it uses a specially designed key to operate.

Ilco has a transponder key department assortment to get you started in the cloning business. It is model number TA227-00-8X and contains the RW2, TD3A, counter signing, counter mat and two each of 11 key blanks. Contact your distributor for more information on this assortment.

If you are ready to get into the transponder business, then you will need a programming tool. There are three main competitors on the market at this time. They include ASP's T-CODE (see photograph 5), Ilco's SDD (see photograph 6) and STRATTEC's CODE SEEKER (see photograph 7).

Continued on page 60





- Ready for use; supplied with 120 code cards,
 2 cutters, & accessories.
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Additional Accessory Items Now Available!



Easy View Code Cards
(A copyrighted IIco exclusive)

Continued from page 58

It is my opinion that all of these tools are well-made and easy to use and will do the job for you for years to come. Which one has more to offer you seems to be related to the day you ask, as each company is adding features and software on an almost daily basis. It is like a horse race. One brand surges ahead only to fall behind when the other company introduces something new.

If you want to specialize in just one brand of vehicle, say Ford, tools are available for each specific brand. They include the NGS for Ford, the DART for Chrysler, the MUTII for Mitsubishi and the Consult II for Nissan/Infinity. These are specialty tools and if you were to buy each of them you would have several times the investment of just buying a multi-programming tool. Only you can make that call for your business.

My suggestions are several. Get your hands on the equipment and see how it feels. Ask questions of those you know that have each type and see how they respond to your questions. Know your market and buy what you need. I also suggest you talk to a rep from the distributing company and get a feel for how you can relate to them. Technical support will be critical to you as you go into the learning curve that will accompany this new technology. If possible, go to classes on the tools and get an opportunity to actually program a car yourself, with their supervision. I think you will be surprised how easy it really is to do.

Once you have made a choice of which programmer to buy, don't second-guess yourself. You have made a significant investment and you should now expect to get help and technical support from the company supplying you with the tool. All the companies have experts to help you, and



Photograph 7.

they will do their best to make the tool make you money. Stick with them and prosper.

One last tool is one that may not cost you a lot of money, but is as critical as anything you have. That tool is information. Information in the form of books. pamphlets, fliers and articles. Read everything you can get your hands on and keep it where you can find it. I suggest you set up a file of this information and keep it with the tools. Another good source of information is on the Internet. Join a forum on the net and see what is available in the line of help. Search for transponder technology and you will be amazed at the available resources.

A couple of books and fliers you should have in your library are the TRANSPONDER GUIDE by Ilco (see photograph 8). AUTOSMART by The National Locksmith, Guide to Transponders by The National Locksmith and the Automotive Transponder System by Michael Hyde from ASP. Information does not cost, it pays, and when you need it, it is priceless. Consider it as part of your investment to do transponder work and keep up to date with it, or maybe I should say, keep as up to date as possible given the rapid changes occurring in the field.



Photograph 8.

Some websites you might be interested in include:

- www.lilocksmith.com
- www.carlocks.com
- www.tcodeusa.com
- www.autotel.info
- www.streetkevs.com
- www.hickok-inc.com
- www.demanda1.com
- www.kaba-ilco.com
- www.transponderinnovations.com

If you want to contact any of the manufacturers mentioned in this article, here is their information:

Auto-Security Products

Phone: 425-556-1900 Fax: 425-558-1205

Email: info@carlocks.com Website: www.carlocks.com

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TEShter By SARA DOS One Reader's Story

I received a letter from a fellow locksmith a few weeks back, and decided to share it with you in its entirety (with a little minor editing and a few name changes to protect the guilty and ward off a law suit or two)!

"People Never Cease to Amaze Me"

I recently saw a how-to clinic in a flyer from a local major national home- improvement/hardware chain store. It was titled, "Install a lockset." It was offered on Saturdays every month in July at 2 PM.

I decided to go and wandered the store a few minutes before I began trying to find the location. After touring the whole store, I was unable to find the seminar, so I stopped at what appeared to be a customer service counter near the front of the store. I luckily had the printout from my computer to show the lady, as I inquired where the clinic was being held.

She asked at least three other guys, "Are you going to teach this class?" No one seemed to know anything about this clinic—which brings up a point already. Does anyone really want to install his or her own locksets? I was in serious consideration of offering or teaching a home security or similar class in my area. I think I now know the answer to that question. One of the guys then offered to have a one-on-one with me, because they did not

anticipate anyone else showing up. That's probably why no one was ready to teach it, anyway.

The lady at the counter wanted to know if I would also like to learn how to rekey locks. I am not sure if she was kidding or serious, but I am sure they would have shown me that, too. There was a guy sitting at the counter with two Kwikset pin kits and a Schlage kit with a large file and several other tools. I knew right away someone was in trouble, and for once in my life, it was not I. He was grinding down the pins to fit. Not to mention the lock was a lousy consumer version of a Schlage single-cylinder deadbolt. The pin tumbler cap had been totally removed and ruined, so far as I could tell. The price tag on the pin box said "\$5.00 per rekey." Not bad, considering they probably pay the guy \$7.00 an hour (labor), and it's going to take at least half an hour to file and reassemble the whole now-screwed-up works. That's 2 locks an hour and a (gross) profit of \$3.00.

I continued to watch as I waited for my one-on-one session. Several customers were flocking in to have duplicate keys made. That was very interesting, also, watching someone poke keys into little plastic face locks to find the right blank. Why in the world would people go to a major national home-improvement/hardware chain store for keys? They are only doing us (locksmiths) a favor.

Imagine the disservice to themselves and future service calls, for all the broken-off keys, potential stranded motorists, and further messed up locks and lockouts that can be generated.

It's now time to reassemble the cylinder. Now the guy needs to recap the permanently damaged cylinder housing. What does he grab next? Sitting on the desk, or workbench, among three open pin-kits (two Kwiksets and one Schlage, remember?) and he grabs a roll of clear cellophane tape, which he uses to tape the cap to the cylinder. Then he shoves it back into the housing.

I'm not sure if I want to laugh, wet my pants, cry, or just pass out. He then mentions something about it being sticky or rough. Well, tell you what: If I had time to file all the pins to make it work, I would at least finish the job. It must have been the tape holding it up, you suppose? I am not sure what happened next, but my guess is, it was turned over to the customer, who was standing by the work area, watching the whole experience, as I did, myself.

I was then greeted by the guy who had just performed the lock "operation." His apron displayed the name "BOB." He wanted to know what part of lock installation I was interested in. I told him I was interested in general installation. He was now digging in all the rubble for a template.

He finally found one and showed it to me, informing me that every lock had one of these in it. Wow! A free piece of paper that says, "23/8-23/4" in every lockset. Who here does not own a ruler or tape measure? Please tell me now, and I will send you a free template.

He then continued to show me different installation kits offered. The most basic was \$6.99 with a 2½ hole-saw and a paddle bit. The more elaborate version had two hole saws and a plastic guide, for about \$20. His only suggestion was that I might want a chisel, too. He said it would work, but you might make the hole crooked, so he suggested buying the one with the plastic thingy, to make the installation a little smoother. "Thingy" is my word, as I know no other way to describe it. It's basically a cheap plastic jig. Wish I'd known this when I purchased my Schlage installation jig kit. I could have saved over \$593. He also showed me on a door how to use the paper template.

He said, "If you already have a hole in the frame for the part that goes there, and no hole in the door, it's pretty hard to line up." I won't disagree there. I think he meant the strike plate perhaps? I thought someone would at least teach me the old lipstick trick, or they would have had a plastic thingy for that, too.

It was also suggested that I read the instructions provided

with the lockset. He said the backset doesn't matter, because all locksets have both. Oh, really! Guess so, since they don't sell Schlage D series commercial grade \$300 lever-sets.

Next, he said, "You can mount a deadbolt anywhere on the door that you want to, unless the holes are already there." How about as close as possible to the doorbell button, or better yet, the porch light switch? This was after I asked him how high the hole for a deadbolt should be.

I asked him if a wood drill set would cut metal, and he said, "No." Thought I might catch him on that one, but it didn't work. He said even if you messed up the holes "crossbore," the lock would cover it up. I think he meant the "rose." Maybe he should try drilling from both sides. Then it will not splinter in the first place.

Of course, all that's fine, unless you use a lousy drive-in bolt, as suggested, because then you'd have to really know something or be a carpenter, or own a hammer. I assume. If it's not mortised in, the whole thing will become loose, and you'll get ring around the "rose"—not ring around the rosie—and all the hardware will be falling off the door. But what do they care, if you mess up a \$400 double French door with beveled glass, or at least the hardware? They will be happy to sell you another, and more tools to go with it.

"BOB" was kind and sincere, but he had no real knowledge of actual parts or what they were called. I was starting to feel like a producer from "Punked" on MTV. I wanted to say, "I am a locksmith. You have just been punked" The other half of me just wanted to take him aside and teach him how to do it right, but I'm not sure what the value or lesson would mean to him.

"BOB" works for a big-box retailer that presumably did not properly train him. Nor do they care, so long as they produce that \$3.00 margin of profit on his hard labor filing all the pins down and compromising what little security the cheap lock had to begin with. Why don't they jut file all the pins at once and damage the plug, too?

The biggest lesson—which was nothing new to me—was, "Hire a professional, even if it costs a little more." But the bottom line is, "Thou shall not fear the major national home improvement/hardware chain stores, for they shall be considered our best of friends.

Most of this story is true and occurred in Lincoln NE. Would you like to go with me next week, when we can all learn how to install a ceiling fan?

Many thanks to Tim Hopkins of Advanced Security, Lincoln NE, who, in his own words, has "owned my own lock and security business for over 15 years. And people never cease to amaze me."





ometimes you come across an old friend that you have not seen in a long time. In this case, it was an old Cary Safe. I cut my safecracking teeth on these old monsters. At one time they represented a challenge. Now, armed with good scopes and not a grain of wheat bulb, the opening on this aged and historic safe proves not to be a big problem to the modern safecracker, if they know a minor secret.



and dial placement. The distance between dial and handle is almost 8". The hinge shape is also indicative of Cary Safes.

The true fact of the matter is most of these safes are in junk-yards. The chances of you ever seeing one of these interesting safes is slim. The best part of this safe opening was that it was located in a Blacksmith Shop. If you ever get the chance to open a safe in a shop like this, take it. There is an abundance of tools and heavy moving equipment, pressurized air, and people willing to help you (and learn).

Cary did manufacturer around the turn of the 20th century a line of standard type direct drive safes. They also made a diabolical offset gear driven dial safe as is pictured in *photograph 1*. There are a couple of things that instantly shout Cary Safe when you first look at the unit. First, and foremost, it says Cary Safe on the dial ring. It was scratched and worn, but just readable. The second feature that gives it away is the lobes shaped hinges. These were distinctive to Cary Safes and only Cary Safes.

To me, the most distinguishing characteristic was the placement of the dial and dial ring to

the right of the centerline of the door of the safe, along with the 8" distance between the dial center and the opening handle. Granted, some of these safes have large diameter wheels, but not that large. The secret to this configuration was an offset dial to wheel pack arrangement. This same arrangement was used on better vault doors and money chests of the late 1800's and early 1900's, and is still used today on modern vault doors.

This arrangement is known as the offset dial configuration. With most new safe locks, the dial and dial ring sit directly over the wheels of the combination lock. If you pull the dial on these more modern locks and punch the spindle, then either the wheel pack or at least the drive wheel or cam will be punched into the inside of the safe. On an offset combination lock, punching the spindle will only punch a small gear into the safe and the wheels will be untouched. On some money chests (Diebold), the geared dial spindle was above and at an angle to the combination wheel pack. If

Continued on page 70

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Continued from page 68

you drilled in at the outside the dial ring on one of these safes, you would be asking yourself "Where is the wheel pack?"

Where do we drill for the offset on this safe? Approximately halfway between the dial and spindle will do nicely. If you want a precise measurement, then 3-3/4" sounds about right (see photograph 2). The drop in area is at number 75 or left of the dial ring. I drilled this hole with a cordless DeWalt drill and 6" long 1/4" drill bit. There is no hardplate, but plenty of old insulation that must be drilled through.

Once the inner plate of the lock case has been penetrated, the edge of the wheels and the edge of the bolt bar can be seen through your drilled hole with a good straight ahead scope or otoscope. The gearing on the lock unit was accomplished with three small sprocket wheels, which made the turning correct. When you turned the dial to the left, the wheels also turned to the left.

The one tricky and time-consuming part of the dial open was that the first wheel on the wheel

Continued on page 72



2. Hole is offset 3-3/4" from dial center. Drop in area is at number 75 on the dial.



3. Rear door panel. "The Cary Safe Co., Ltd. Buffalo, New York".

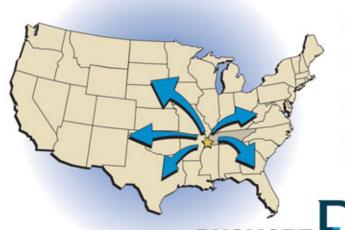


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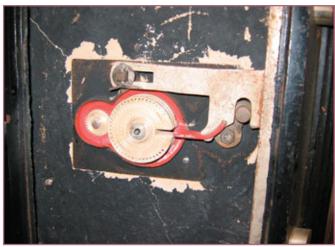
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4. Closed and open lock cases were common. The small circle to the left is for the dial gear and the large case to the right is for the four 3-1/2" wheels.



5. Case cover removed with all wheels lined up. No relocker needed on this lock. If punched, only dial gear would be lost.

pack was the last number of the combination. This is similar to dialing open Mosler combination locks where the wheel closet to the door is the last number of the combination. Then you must determine the next number of the combination that would be the third number. Dial and turn, dial and turn back to

the last number, until you determine the next number. This must be done for all 4 wheels of the lock. Not really hard, just time consuming.

The safe was beautiful inside with locking drawers that were all unlocked. That is not a common occurrence. The keys for the drawers were in the drawers too. Another blessing that the safe fairy granted me that day. The back plate over the door and lock mechanism is shown in *photograph 3*. It reads in hand painted script "The Cary Safe Co., Ltd. Buffalo, New York."

The inside of the safe was painted too, and the lockcase itself was a shiny black with red

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outlines. Cary made open and closed lock cases, both custom like this one and square shaped. They also had completely open cases where the wheels were open to the dust and dirt (see photograph 4). The case here consisted of a little round case for the gear on the dial spindle, and a larger case to cover all four combination wheels.

A single flat head screw holds on the case cover. Once it was removed, the wheels and the gears were exposed. These large hand change screw hole wheels are not hard to work on, but it takes time to disassemble the wheel pack, remove the spline keys and all the parts. A nice help is that all the parts, wheels, and spacers are numbered between 1-14, so that reassembly of the wheel stack is orderly (see photograph 5).

Once the wheels are aligned correctly, turn the outside handle

in a clockwise direction to withdraw the two large locking bolts on the opening side (left) of the door. Photograph 6. shows the direct drive fence in the wheel gates. Before the dust settled, the owner of the blacksmith shop had welded the outside hole in

the safe door shut and had ground it smooth (Without my asking).

Everyone was a little disappointed that the safe held nothing but the keys to the locking drawers.

The next day, the owner of the Cary safe called me and thanked me for opening the safe, and asked me if I wanted to buy it for



6. Clockwise turn on outside handle withdraws the two locking bolts on the opening side of the door.

the cost of the opening? Apparently the blacksmith had added on a few dollars to my price.

I really had no use for a \$200.00 used 100-year-old safe. I told him that I might be interested in buying the lock at some future time, without the safe surrounding it. Who knows?

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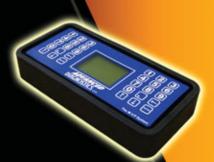
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Old Diebold Cashgard

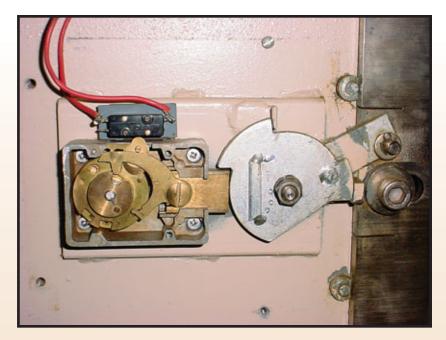
> Safe Manufactured by Diebold

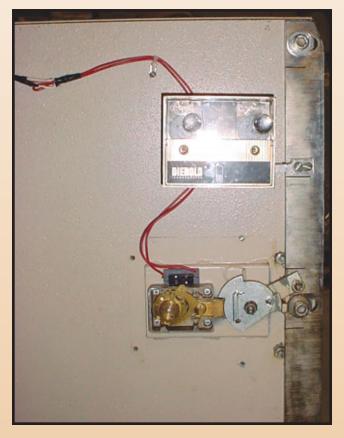
> > **UL** Rating TL-15

Safe Size 40" Wide and 40" High

Door Size

32 1/4" Wide and 30 1/4" High





Handle Type L-Style

Handle Location

 $15\frac{1}{8}$ " Down and $3\frac{3}{4}$ " Right of opening edge.

Handle Rotation

Clockwise top open

Dial Center to Handle Center

4½" on horizontal center

Dial Location

 $15^{1/8}$ " down and 8" right of opening edge

Number of Door Locking Bolts 1 flat steel bar

Door Locking Bolt Locations From top of door to bottom

Door Locking Bolt Diameter

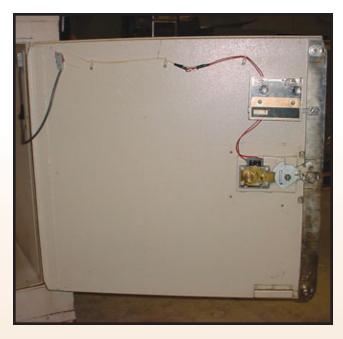
3/8" **Door Thickness to Bolt Center**

1 7/8"

Door Thickness to Lock Case

Door Thickness to Back of Lock







Old Diebold Cashgard

Combination Lock TypeDiebold

Combination Lock Description 177-38 lock

Combination Lock Case Thickness 1 1/8"

Number of Wheels

Driver LocationRear

Combination Lock Handing Right hand

Drop-In Location

Combination Lock Drill Point 98 @ 7/8" Scope wheels under fence.

Combination Lock Relock Trigger TypeNone

Combination Lock Notes:

External Relock Device Type

Two spring loaded pins held down by the back cover of the door. If the cover is removed or the lock is punched the pins extend to block the door locking bolt from retracting.

External Relock Device Drill Point

Upper $5^{3}/4$ " left of D/C and 3" up. Lower is $5^{3}/4$ " left and $3^{1}/4$ " down. This will place a hole next to

the relockers, a bent wire or pick can be used to retract the pins. If the cover has merely come loose you can try a side drill if possible at $3^{1/4}$ " in from face of door and around 16" down from top of door. Insert a probe or pick and push cover towards front of door. Note if you side drill you will be drilling through the poured concrete lining.

You may also try a single hole through the door to pull the back cover into place at $5\,^{3}\!/_{4}$ " Left and $1\,^{1}\!/_{2}$ " Down.

Time Lock Manufacture Diebold

Time Lock Type

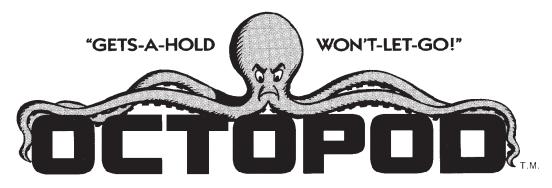
Three movement case with a spacer in the middle time lock position.

Time Lock Drill point for release mechanism: 7" up and $2^{1}/4$ " Left, drill through the door and into the time lock case. At this point you should be in between the fork of the release bar, now probe the lever up to release the blocking bar.

Time Lock Snubber Bar Drill Point 7 1/4" and 5 1/2" left of D/C.

Time Lock Note

Although I am providing the time lock positioning, I believe this units was an add on. There are many pencil marks and several mis-drilled holes underneath this unit. Please investigate placement before committing yourself to a hole.



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- Can be used on narrow stile doors and frames with a frame width of only 15%."
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- Mounts at top or bottom of door or both.
- Equipped with a 9" long locking bolt with a 23%" throw as standard. (Optional 40" bolt available for special applications.)
- Each lock is supplied with a #1 gear (for use with standard mortise cylinders) locking rod, one way screws and instructions.
- Special #2 gear is available for use with Medeco mortise cylinders.

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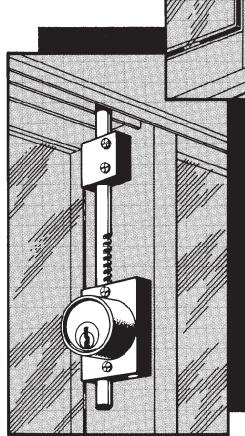
5002-1-9A – Aluminum Powdercoat #1 gear 5002-1-9B – Polished Brass #1 gear 5002-1-9C – Polished Chrome #1 gear 5002-1-9D – Duranodic Powdercoat #1 gear

5002-1-9W-White Powdercoat #1 gear

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Installation at top of center or side of sliding door.

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7th Prize

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\$500 in Strattec Auto Products



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11th Prize

Sargent & Greenleaf 6120

Electronic Safe Lock



12th Prize
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2004 Pro Set



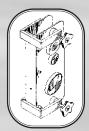
Major Manufacturing's HIT-111 Drill Guide



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Manufacturing
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Framon Impressioning Handle



<u>19th Prize</u> Gator Tool Multi-Purpose Facecap Tool



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Tips Start on Next Page



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A Few Words From Jake...

Time is going by so fast that I sometimes wake up wondering whether I've even been to bed yet! Before we know it; it'll be Christmas and the end of the year.

The last half of this year has zipped by like the Wabash Cannonball trying to make up time on its trip to the wide Pacific shore! But, for me, the time has flown so quickly because I have been a busy, busy guy.



by Jake Jakubuwski

Not only did I finish the biggest book I have ever written; I walked it through every stage of production, from the graphics, to the printing, to the distribution. All so I could introduce it at ALOA, last July!

Well, I got the book written, proofed, printed and packaged in time for ALOA—and it's been double-time ever since.

Don't get me wrong. I'm not complaining—it's just that I thought the biggest part of the job was to get the book to the printer! Hah!

Anyway, my big, new book: *Aluminum Stile Door Service and Repair* is available through *The National Locksmith*. For those of you who may not know what the book is all about; it's about the servicing, repair, replacement and rehabilitation of aluminum stile doors.

The book covers everything from pivots to panic devices (as they pertain to aluminum stile doors) and with 758 photographs and illustrations (and four-hundred and twenty-three pages!), this book takes the fear out of servicing aluminum stile doors—believe me!

The National Locksmith has this book for sale in the TNL store. If you want a peek at what's in the book, go to my website (www.aaamericanlocksmith.com) click on the "BOOKS" tab and then click on the thumbnail depicting the book.

Well we aren't far from stuffing our gullets with turkey, dressing and complementary side dishes, so, let me wish each of you a Happy Thanksgiving.

See y'all next month!



Bypassing a Gardlock

I use the following procedure to gain entry on a Gardlock push button lock on a narrow stile door when the combination was not available.

First, I remove the turn knob by removing the 8-32 screw securing it to the shaft, (see figure 1). Then I drilled a ½16" hole in the lock case as close to the turn knob shaft as possible.

Then with a beveled probe, I lifted the solenoid pin out of the

inner turn knob cog. While holding the pin up I rotate the turn knob to open the lock.

A longer 8-32 screw inserted in the bottom of the turn knob shaft will assist in turning.

> Cec Bacon Ontario, Canada

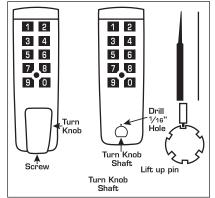


Figure 1.

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– WINNER –

No Drill GM Cylinder Removal

If you do a lot of work on GM products (for 1995 to 2004), you will probably find this trick a quick and easy way to service these vehicles.

First, as shown in *figure 2*, remove the ears from the ignition switch by sliding the black metal ring retainer toward base of the cylinder—away from you—to remove the ears.

You will notice an access hole on the left side directly inline with the sidebar. Insert a pick to put pressure on the sidebar, rake the wafers with another pick and you will feel the sidebar move.

At this point, using the pick or a small screwdriver, you can turn the switch to the accessory

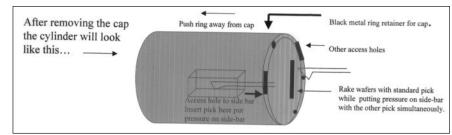


Figure 2.

position to press the retainer and remove the cylinder. After you make the key re-assemble the lock, ears and cap retainer.

No drilling and no mess.

Manuel Almanza California



Homemade Numbering Fixture

Interchangeable steel typesets sold by some distributors, (see figure 3) are a great way to professionally mark key bows,

particularly if the same alpha numeric word or code will appear on multiple keys:

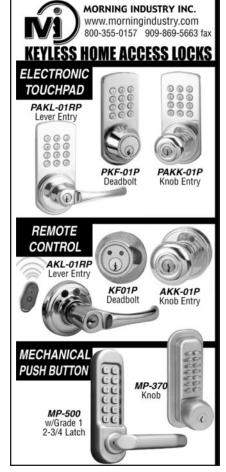
The problem is, you need three hands to do this accurately; One to hold the key on the

stamping block, a second to keep the type holder in position, and a third to strike it with a hammer.



Figure 3.







Ease of operation, flexibility and security are the key words used to describe the SMARTLINC from LA GARD. Providing you with the ability to manage multiple locks through a single keypad, the SMARTLINC was designed with simplified programming and easier access in mind while still giving you the high security you have come to expect from LA GARD.

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Figure 4.

To simplify and expedite the task, I made a simple fixture. It

has a heavy steel base plate, a piece of angle with two spacers, a crossbar to accommodate the type holder and a small toggle clamp to hold the key in position. I believe the image is self-explanatory, (see figure 4.)

This was made largely from scrap obtained from a local welding shop. The only critical dimension is the throat opening to accommodate the type holder. It should fit closely with perhaps .010" clearance all the way around.

The typesets are available with character sizes from $^{1}/_{16}$ " to $^{3}/_{8}$ ". I found the $^{3}/_{32}$ " size to be optimum for key marking while replicating the OEM indicia found on many factory-cut keys. The $^{3}/_{32}$ " type holder will allow up to 12 characters in a space of about $^{1}/_{8}$ ".

Peter P. Schifferli New York



- WINNER -

Broken Key Extraction

I went to a job for a broken key in an ignition. The key was broken off at the very tip. I could barley see the tip of the key and struggled for about 15 minutes pushing the wafers back to grab the key tip and extract. No luck!

I finally decided to put the longer portion of the broken key in the ignition. Then I worked my extractor in though the milling on the key far enough to reach the broken piece and pulled them out together.

Not only was it very helpful to have the other part of the broken key to aid in removal of the tip, it also simplified duplicating another key for the customer.

> Pat Borchert Colorado



A lock off security.

- WINNER -

Corbin Rekey Trick

I was called to do a lock rekey and as I always do, I surveyed the locks to see if they were all compatible so I could key them all alike. Most of the time I can do this.



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Transponder Key separates from the electronic key bow so it can be easily replaced in case of damage or miscut.

The blade of the SMART CLONE

In this case I had four doors, each with a Titan deadbolt and a Corbin entry lock. After I pulled all the locks I found that the new Titan key worked in the Corbin cylinder, but only with the plug out of the sleeve.

By grinding the bottom surface of the blade about ½32", the key fit in the Corbin Plug after I had re-pinned it and assembled it. I finished rekeying all the cylinders, put them back in the door and the customer was very happy because he now only needed one key instead of two! He even gave me a tip!

Another little tip is before your next rekey, make up sets of six keys of each common brand used in your area. In my case I make up several different sets of Kwikset, Titan, Schlage, Yale, Weiser, etc. That way, you speed up your work

because you don't have to sit down and cut new keys!

Clem Gottsacker Wisconsin



Profile Cylinder Turning/Picking Tool

The tip in the August issue of Technitips on opening the profile cylinder prompted me to write.

For unlocking these cylinders, I use a piece of ESP flat spring steel that I ground down on both sides leaving about 1/4" above the ground down "neck" to form a paddle, (see figure 5). The narrow neck will work in most keyways, giving it an advantage over several specially cut keys.



Figure 5.

On single cylinders it acts like a snake pick does on Adams-Rite and Everest.





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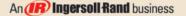
control and affordability. Our mediumand high-security products can be mixed in the same key system and are upgradable, enabling you to tailor security and cost to meet your exact needs. Both levels of security cylinders offer longer patent life (extends controlled key distribution), have keys that can be cut on standard machines (for maximum convenience and savings) and are available in a full range of cylinder types. Schlage. You can't afford the competition.

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6 top pins and

5 side pins provide higher pick-resistance, more combinations

Cutting a "V" shape in the end of this tool provides a sharp fork that allows for grabbing pressure of those locks that have no slot for the paddle to fit into. In many cases you don't have to pick the lock first. A slight inward angle on the fork edge can help push obstructions like pins out of the way. It will navigate most basic profile keyways.

David Craig Illinois



Unican L-1000 Schlage Removal Trick

I had a customer come in with a Unican push button lock fitted with a Schlage IC core key override and no keys.

While trying to pick the lock, I discovered that the lock had five pins and a thought occurred to

me...bump key. I tried a five pin bump key and it worked. Next, I cut a control key to all 9 cuts and filed the ridge down between spaces 5 and 6. On the third "bump", I had the cylinder in my hand and a happy customer.

I don't think this will work if the lock is a six pin because of the control pin cut, but it sure worked well with a five pin.

Hope this helps anybody with a similar problem.

Reed Harmer Ontario, Canada



Contour/Mystique/Cougar Trick

While making keys to a 1999 Cougar recently, I encountered resistance inserting my newly-impressioned door key into the ignition lock. Concluding that I was encountering yet another defective Contour/Mystique/Cougar cylinder, I got the cylinder to turn and was set to replace it.

Although I had a working key, it put up an incredible resistance to removal. After it finally yielded, I rekeyed a stock lock to replace it and found that it was as hard to install as it was to remove. Once installed it turned with a distinct drag through all positions.

Knowing that my replacement was in good working order I investigated farther. Loosening the two Torx fasteners holding





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the ignition switch to the rear of the lock housing I heard a distinct click and found the key now turned smoothly.

Apparently an internal failure of the switch put forward pressure on the lock, causing both difficult key insertion and less than smooth key operation. I imagine this type of failure in an inexpensive plastic switch is responsible for perhaps half of the "lock failures" in this type of car. In the future I'll be loosening the switch before resorting to more forceful measures.

On a related note, my local Ford dealerships list replacement ignitions as only being available as a full set of locks. The part numbers for replacement ignitions follow. The letter from the key code determines the letter designator at the end of the part number, or you can use the depth of the sixth cut from the tip of the key.

A number one cut equals A. A number two cut equals B, etc. Part Number F5R**Z**-11582-A through F5R**Z**-11 582-E are the ignition cylinders for the Ford Contour, while F5R**Y**-11582-A through F5R**Y**-11582-E are the numbers for the Mystique/Cougar locks.

Chris Sawicki New Mexico

LOCKMASTERS INCORPORATED - WINNER-

Fast, Cheap Pinning Tray

When I took Foley-Belsaw's locksmith course, they sent a "pin tray" to accompany a pin tumbler lock lesson. The pin tray was actually a small piece of grooved black rubber mat, (see figure 6). The narrow grooves are the right size for holding pins and springs in place when servicing a lock.

One day while at a local hardware store, I noticed they sell the same matting by the foot; it comes in big two-foot wide rolls. (Home Depot sells a similar, lighter weight vinyl material by the foot in their carpet department.). Either kind cuts easily with a Stanley knife or heavy shears.

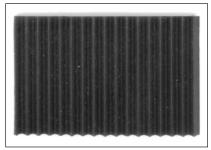
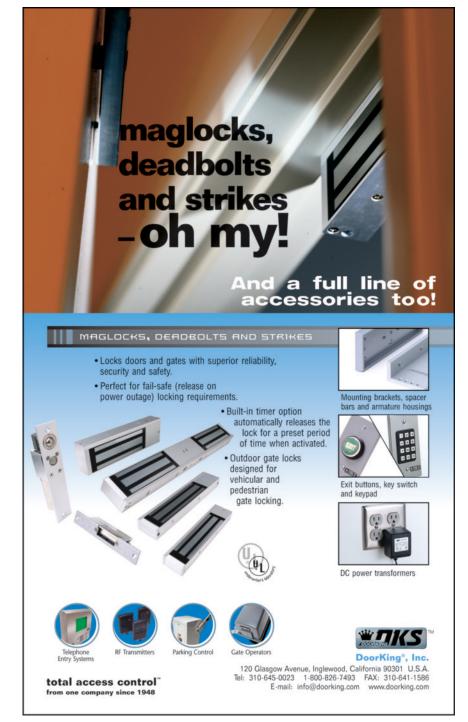


Figure 6.





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Circle 248 on Rapid Reply

I have found this matting is perfect for lining toolboxes and shop drawers as well as placing on a portion of the workbench surface. It provides some cushioning and helps keep followers and other items from rolling around. And, of course, it is excellent as a "pin tray."

George Kenney California

Sieveking Products Co.

Long's Long Reach Slim-Jim

I recently opened a 2004 Chrysler Sebring that had me worried.

Even with use of a sleeve with my long reach rod, I was fearful of breaking the window. I hate wedging doors or windows to use that tool, but some cars it is a must.

After the Sebring opening, I decided to make my own thinner long reach tool and have it a Slim-Jim type rather than a rod. Well I bought one from High Tech, but it was still 1/8" thick. I did try it on the Sebring, but didn't use it.

I went up to the local hardware store and got an aluminum bar stock that was 6 feet long by 1/2" by 1/16". I cut that down to 4 feet and at one end I cut and filed out a notch so it will hook those sliding locks. I drilled two holes at that end and used a 4 1/2 foot long length of 20lb test fishing line so I can maneuver the tool to the lock buttons or slides.

Rodger Long Illinois

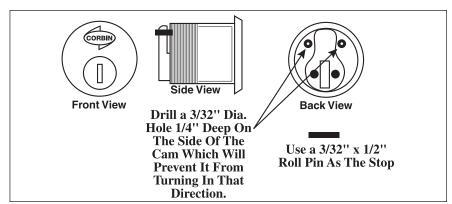


Figure 7.



WildigEIX

Quick Function Conversion

Recently, our locksmith department was called upon to develop an alternate system to secure a number of alarmed and restricted classrooms that were being equipped with computerized audio and visual technology.

Our task was to provide a selfclosing and self-locking system from an existing mix of Corbin and Falcon mortise-style locks with classroom function lever sets.

A costly and untenable solution would be to replace the existing classroom function lock body with one that has a storeroom function.

With a deadline of only a few days, and a minimal number of man-hours available, a quick and economical solution was found.

First, I removed the cylinder. Next, I drilled and pinned the back of the cylinder on one side of the cam, (see figure 7). This will prevent the cam from being turned in the direction by which the cam would actuate the unlocked mode. The plug will still be able to turn in the opposite direction to allow the cam to retract the latch in the storeroom function mode.

Along with the installation of closers, the job was completed well within the fiscal and time constraints placed on this job.

Frank Chelkowski New Jersey

LE LAGGARD

Metal Door Debris Catcher

Whenever I prep a hollowmetal, metal clad, steel, or iron gates, I always seem to have a lot of metal shavings all over the place. They are difficult to clean up (especially off of carpet) and invariably, I wind up with slivers in my fingers.

I found a really neat solution to the problem.

I bought a piece of 24" x 30" magnetic sign material. Before drilling, cutting, or otherwise working on these doors, I place the sign material (magnetic side up) on the floor under the door.

The magnetic material catches—and holds—all the metal shavings, drill debris and other filings that might drop from the holes I'm cutting.

To clean the "drop cloth", simply carry it to a trashcan or dumpster, brush the filings off, and every once-in-a-while give it a good hosing down.

Bob Roman Maryland

 $\Pi \Pi$



BUSINESS BRIEFS

STRATTEC Promotions

STRATTEC SECURITY CORPORATION is upgrading two important positions in its distribution center to enhance service to customers across the U.S. and Canada.

In their new roles, Jeff Baker, Distribution Sales Representative and Vera Latus, Customer Service Representative for Distribution Warehouse, will assume responsibilities for assisting and communicating with distributors on a day-to-day basis.

Jeff Baker, who has a quality engineering background and years of hands-on product experience inside the company. "Our efforts will continue to focus on satisfying requests, exploring opportunities to improve market penetration and to help them grow their business."

Vera Latus, who has been with STRATTEC for nearly a decade, is looking forward to serving distributors.

Both Baker and Latus agree that constantly improving the way STRATTEC communicates with distributors, via phone, printed communiqués, interactive efforts and face-to-face meetings at distributor shows, will make for more than just satisfied customers.



Jeff Baker



Vera Latus

Jeff Baker can be contacted at: Phone: (414-247-3421); Email: jbaker@strattec.com.

Vera Latus can be contacted at: Phone: (877-251-8798); Fax: (877-251-8799); Email: vlatus@strattec.com.

ASSA ABLOY Sells Folger Adam Security

ASSA ABLOY has completed the sale of the principal operating assets of its Folger Adam Security Detention business to Phelps-Tointon, Inc., the owner of Southern Steel, also a detention business operator.

The detention business has annual sales of SEK 100 M and the transaction has a positive effect on ASSA ABLOY's operating margin.

The sale of the Folger Adam Security Detention business is a part of ASSA ABLOY's 'Leverage and Growth' program which aims to create a firm foundation for sustainable and profitable growth through better utilization of Group strengths.

ASSA ABLOY continues to own and operate Folger Adam Electric Door Controls, a supplier of a full range of electric strikes, magnetic locks and other related products. Folger Adam Electric Door Controls will continue to be an integral part of ASSA ABLOY's door security solutions growth strategy.

Boyle & Chase Welcome New Sales Team Member

Boyle & Chase welcome JR Hentschel as a new member of their sales team.

As a wholesale hardware distributor with a broad inventory of security products by Ingersoll-Rand, Kaba Ilco and Folger Adam, JR will bring electronic expertise to a strong mechanical team.

One of JR's primary responsibilities as Director of Access Control will be developing a new customer base while supporting and maintaining Boyle & Chase's existing customers in this field.

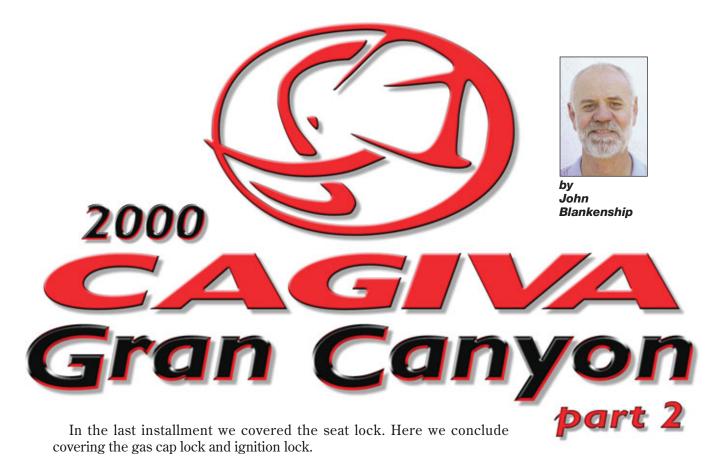
His extensive background in electronic access control will help provide Boyle & Chase customers with the information they need to layout and design a full access system or electrify any door opening.

JR welcomes your questions by contacting him at Boyle & Chase at 800-325-2530, ext. 147 or jr@boyleandchase.com.

Gill Named YSG Director of Architectural Development

Michael I. Gill. Government Business Development Manager for YSG Door Security Consultants, has been named to a new position, Director of Architectural Development. In his new role, Gill will be responsible for developing and directing the specification of YSG products and services to architects, end users and security consultants. In addition. Gill will continue in role of managing YSG's government business initiatives in the Washington, D.C., area and beyond.

Gill has more than 30 years' experience in architectural hardware, locksmithing. construction and operations management. He serves as an adjunct faculty member for the U.S. Department of **Defense Security Services** Academy, teaching courses on physical security management and locking devices. He is also a member of the American Society for Industrial Security (ASIS) and a member of the American Society for Testing and Materials (ASTM) Homeland Security subcommittee. ITL



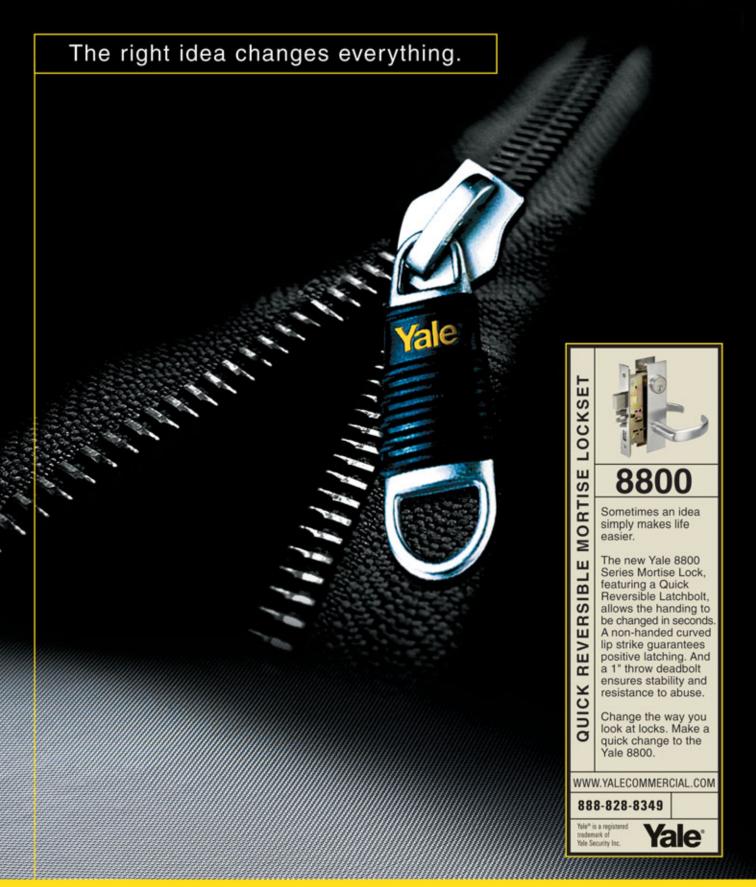
Gas Cap Locks



1. This view from the drivers seat shows the ignition lock in front of the handlebars and the dual gas caps on top of the gas tanks.



2. To remove the whole gas cap assembly so you can take it to a workbench, pick the gas cap locks 90 degrees clockwise to unlock them. These locks picked easily using a rake but you have to know where to rake. This shows the gas caps as they appear when you are sitting on the seat. Insert the tension wrench in the top of the keyway and apply tension clockwise. This will open the dust shutter so you can see the first tumbler. It is in the bottom of the keyway on the left side and is not easy to see. This is because it is not brass; it is the same color as the inside of the keyway. Also, it does not extend all the way across the keyway; it is only on the left side. Use the pick to depress the first tumbler and you can tell where to rake because all six tumblers are inline on the bottom/left side of the keyway.



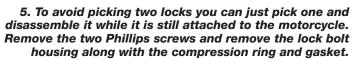
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AN ASSA ABLOY



3. Insert a rag into the filler necks so nothing drops into the tank while you are working. Use a 4mm hex key to remove three bolts that secure the mounting plate to the gas tank. Two of the bolts are shown removed and the hex key is in the third one. The other bolts are cosmetic and do not have to be removed. Then you can take the whole assembly to a workbench.



Continued on page 112



4. The gas cap assembly is removed from the motorcycle.





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Our electronic lock family is the broadest in the industry.

And it's built tough and designed to fit most any commerciallgrade application you may encounter. But most important,
they're all backed by the S&G customer service and support
that's always there when you need it.

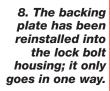
So, if you haven't tried one of our electronic locks lately, contact your S&G Distributor and see the difference.



6. The backing plate usually comes out of the lock bolt housing when you remove it.



7. The lock bolt housing along with the compression ring and gasket have been removed. The backing plate is on the right.









9. Remove the four springs and store them so they don't get lost. Then use a dental pick to remove the oring from around the back of the plug. There are two brass rings under the o-ring that also need removing.



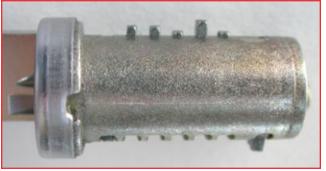
10. I stored the four springs, o-ring, and two brass rings in a magnetic parts dish.



11. Now you can see the retainer on top of the plug. Depress it and push the plug out the front. You do not need to be concerned about the wafers falling or springing out.



12. The plug is being removed along with the rubber sealing ring.



13. A blank inserted into the plug shows the cuts are 133242, which is code 8303.



14. A code cut ZD22RBP blank with cuts of 133242 turns all four locks smoothly.

National Auto Lock Service, Inc. 1-800-954-5454

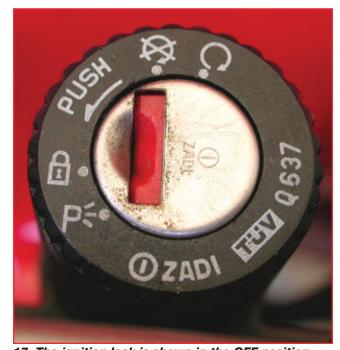






15. Install the rubber sealing ring so one of the tabs is aligned with the retainer.

Ignition Lock



17. The ignition lock is shown in the OFF position, which means the ignition is off and the steering is not locked. A slight turn clockwise turns the ignition to ON. In order to turn the lock 90 degrees counterclockwise to the LOCK (steering locked) position, you need to turn the steering to the right or left, then push the plug in and allow it to spring back out before it will turn. You do not need to push the plug in prior to turning the lock from LOCK to OFF. A slight turn past LOCK is the PARK position (parking lights on and steering locked). The key can be removed in the OFF, LOCK, and PARK positions. This lock impressions well; it marks the blank good and the wafers are strong. Make sure you do not push the plug in when impressioning because the plug will not turn while it is pushed in.



16. Insert the plug with the retainer aligned with the notch at the 1 o'clock position. Depress the retainer, push the plug all the way in, turn it to the 12 o'clock position, and remove the key. The tab on the rubber ring will stay in the notch so that it does not turn with the plug.



18. The ignition lock is secured to the triple-clamp by two bolts. There is a lot of room around the lock.



19. The bolts that secure the ignition lock are visible when you look up from next to the front fender. Use a 5.5mm hex key or hex bit socket to remove the bolts so you can remove the lock.



20. The switch is secured to the lock by two small shear head bolts.



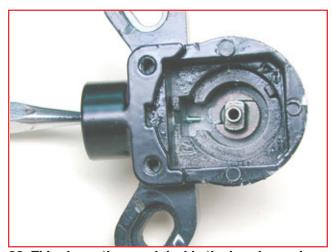
22. This shows where to drill a poke hole if the lock is in the OFF position. The hole should be aligned with the bottom/center of the plug, not with the keyway. To help determine the bottom of the plug, look for the word 'ZADI' stamped on the chrome facecap of the plug. The bottom is closest to the 'I' and the top is closest to the 'Z'. The retainer is 1.047 or 1 3/64 inches (26.6mm) from the face of the plug. As soon as you depress the retainer the plug will spring part way out of the cylinder due to the spring on the back of the plug.



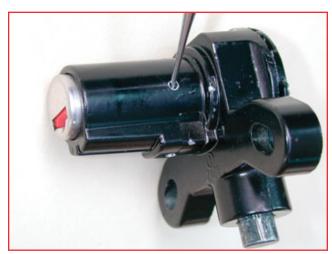
24. If the lock is in the LOCK position it is best to remove the cylinder sleeve before drilling the poke hole. Use 2 screwdrivers to raise the locking portions of the sleeve as shown in the photo. Twist a third screwdriver between the end of the sleeve and housing to force the sleeve forward.



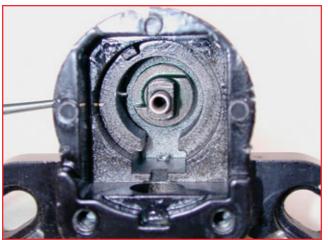
21. Use a Dremel to cut screwdriver slots in the two small shear head bolts. A screwdriver easily removes the two bolts so the lock can be separated from the switch and taken to a workbench.



23. This shows the punch inside the housing and almost to the retainer. As you can see, the retainer is not close to the poke hole.



25. This shows where to drill a poke hole if the lock is in the LOCK position. The hole should be aligned with the bottom/center of the plug, not with the keyway. The retainer is 1.047 or 1 3/64 inches (26.6mm) from the face of the plug. As soon as you depress the retainer the plug will spring part way out of the cylinder due to the spring on the back of the plug.



26. This shows the punch inside the housing and touching the retainer. The retainer is close to the poke hole in this position.

Specifications

Codes: 8001-9554 (Zadi)

Blank: Silca ZD16RP, ZD22RBP, ZD23RCP or ZD24RDP **Spacing:** 1=.146, 2=.256, 3=.366, 4=.476, 5=.587, 6=.697

Depths: 1=.310, 2=.281, 3=.252, 4=.224

Note: Most code programs show the following depths because these codes first came out using the Silca ZD10P blank, which is .301 wide. These depths will

work but are not exact.

Depths: 1=.301, 2=.276, 3=.250, 4=.224

DSD: 735

 Tumbler Locations:
 1 2 3 4 5 6

 Ignition:
 X X X X X X

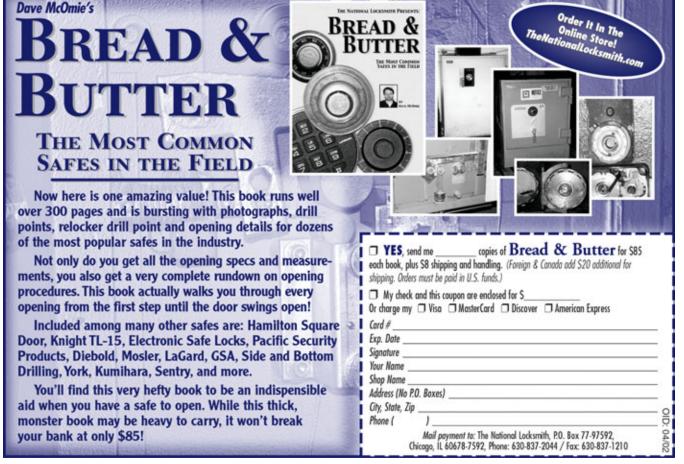
 Gas Cap:
 X X X X X X

 Seat:
 X X X X X X X



27. The plug has been removed. The spring on the back of the plug did not want to come out easily so I left it in. This lock has six wafer tumblers all on one side of the keyway plus the retainer. When reinstalling the plug in the cylinder, the retainer will contact the back of the locking groove and prevent the plug from being fully inserted. Therefore it is necessary to first use a screwdriver to turn the tailpiece to a position midway between OFF and LOCK. Then insert the plug in the same position with the retainer aligned between the locking grooves. Depress the retainer so it will enter the cylinder

in this position. The plug can be inserted 180 degrees off so be sure the retainer is on the lower right of the cylinder when installing. If you install it wrong you will have to drill another poke hole to remove it again.



Taking Industry Products for a....

TEST DRIVE

Keedex K-18 Change Key Set



THE NEED:

If you change combinations on safes, you know that there are times you spend more time looking for the correct change key than it takes you to do the combination change. It seems like the change keys sprout legs and wonder off, always to the last place you would look for them. Even if we have a special location for each of our tools, we tend to put them down in other places when we are in a rush to get to the next job.

Another fact of life is that if we don't do a lot of combination changes, we tend to forget which key works correctly with which brand of lock. This is a fact that can lead to very serious consequences, things like combinations being off or failure to correctly seat. These are not a professional result and are not acceptable to us or to our customers.

THE ANSWER:

Keedex is aware of the lost key problems and the need for using the correct key, and have come up with a couple combination change key sets to solve the problem. The K-GSA set is for locksmiths that work on GSA containers and although it fills a need, is not as commonly used by most of us as the K-18 set. If you work on GSA containers, the K-GSA set is needed in addition to the K-18 set.

The Keedex K-18 Change Key Set contains twelve of the most common change keys in one handy case.

The change keys fold out like a pocketknife, leaving the unneeded change keys in the case, out of the way. When you are through with the key you are using, simply fold it back into the case and it clicks into place, ready for the next time you need it.

USING THE CHANGE KEY SET:

The K-18 Change Key Set keys are made of stainless steel and the case is engraved with the description of use for each individual key. It contains the following keys:

- Mosler 35-4 Wheel
- Mosler 302-4 Wheel
- S&G AMSEC 3 Wheel
- S&G 6720-3 Wheel
- · Diebold 180-3 Wheel
- Diebold 177-4 Wheel
- S&G Padlock-3 Wheel
- S&G 4163
- La Gard 1R-3 Wheel
- La Gard 3 Wheel
- · LaGard 4 Wheel
- LaGard Amsec-3 Wheel

Another useful feature of this set is that the change key has the corresponding number stamped into it to match to the engraved description

IN SUMMARY:

DESCRIPTION: A change key set with twelve of the most common change keys in one case. Keys are made of stainless steel and the case is engraved with the proper usage for each key.

COMMENTS: Just the fact that I don't have to go looking for the correct change key each time I need one is reason enough to have this tool in my toolbox. The time saved by not having to go looking for the key I need will soon pay for the tool. I can now be certain that I am using the correct key for the lock I am changing, as well.

TEST DRIVE RESULTS: A very well made and exact product that give an exact tool for the model of lock. Each key is held in place with a detent and that keeps it out of the way when using the one you need. Buying this tool is an investment well worth making, even if you have been changing safes for a long time and have a box full of change keys. Get this set and be sure you are using the correct change key each time.

of use on the case. All you have to do is match the number on the key to the number on the description and you know you have the correct key for the lock you are changing. It doesn't get much simpler than that.

ORDER INFORMATION:

The Keedex K-18 Change Key Set is available from most wholesale distributors, but if you want more information on this or another of their fine products for locksmiths contact:

Keedex Inc.

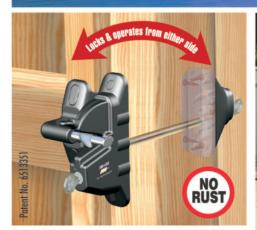
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